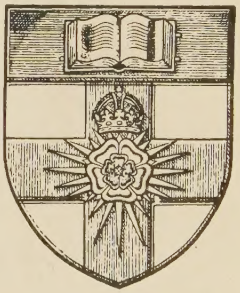
SHL
WITHDRAWN



UNIVERSITY OF LONDON
LIBRARY

ROBERT ANDERSON

Digitized by the Internet Archive
in 2026

https://archive.org/details/chartered-surveyor_1869-1870_2

THE INSTITUTION OF SURVEYORS.

TRANSACTIONS.

VOL. II.

SESSION 1869-70.

LONDON:
PUBLISHED AT THE ROOMS OF THE INSTITUTION,
12, GREAT GEORGE STREET, WESTMINSTER, S.W.

[ENTERED AT STATIONERS' HALL.]

All rights of translation and reproduction reserved.

BIBL. LONDIN. UNIV.

LONDON:
PRINTED BY GEORGE PHIPPS, 13 & 14, TOTHILL STREET,
WESTMINSTER.

CONTENTS.

PAGE.		NO. OF PAPER.	AUTHOR OF PAPER.	DATE.
				1869.
v.	List of Officers, Session 1869-70			
vi.	Objects, &c., of the Institution			
1	Opening Address, as President .	11	J. Clutton .	Nov. 8
15	The Distribution and Agricultural use of Town Sewage (continued)	12	W. Hope . .	Nov. 22
49	Discussion on ditto . . .	. .	. . . . .	Dec. 6
				1870.
67	The Enfranchisement of Copyholds of Inheritance . . .	13	E. Smyth . .	Jan. 10
103	Adjourned Discussion on Mr. Hope's Paper	. .	. . . . .	Jan. 24
129	Discussion on Mr. Smyth's Paper .	. .	. . . . .	Feb. 7
151	Farming Covenants . . .	14	E. P. Squarey.	Feb. 21
175	Discussion on ditto . . .	. .	. . . . .	Mar. 7
197	Discussion on ditto . . .	. .	. . . . .	Mar. 21
217	A Plea for Culture in the Profession of a Surveyor	15	J. Mathews .	Mar. 21
233	Discussion on ditto . . .	. .	. . . . .	April 4
249	Parochial Assessments (continued) .	16	E. Ryde . .	April 25
273	Discussion on ditto . . .	. .	. . . . .	May 9
295	Notes on the Inclosure Acts and their Results	17	Rd. Hall . .	May 23
321	Annual General Meeting and Election of Officers, 1870-71 . .	. .	. . . . .	May 30
323	Report of the Council			
328	Statement of Receipts and Expenditure, 1869			
	APPENDIX.			
330	Memoir of Robert Thring			
331	List of Donations and Contributions			
335	List of Members and Associates			

NOTE.

THIS Institution does not, as a body, hold itself responsible for statements made or opinions expressed, either in the Papers read or in the discussions which have occurred, at the Meetings.

The Institution of Surveyors,

12, GREAT GEORGE STREET, WESTMINSTER, S.W.

OFFICERS, 1869-70.

COUNCIL.

President.

JOHN CLUTTON.

Vice-Presidents.

HENRY ARTHUR HUNT
JEREMIAH MATHEWS
RICHARD HALL
EDWARD NORTON CLIFTON

Members.

CHARLES FREDERICK ADAMS
WILLIAM JAMES BEADEL
FREDERICK JAMES CLARK
HENRY CRAWTER
JOHN BAILEY DENTON
ROBERT COLLIER DRIVER
THOMAS HUSKINSON
JOHN OAKLEY
EDWARD RYDE
EDMUND JAMES SMITH
WILLIAM STURGE
FRANCIS VIGERS

Associates.

JOHN HORATIO LLOYD
FREDERICK JOSEPH BRAMWELL

Treasurer.

ROBERT DRUMMOND.

Honorary Secretary.

JOHN WORNHAM PENFOLD, 17, Parliament Street, S.W.

THIS COUNCIL WILL CONTINUE UNTIL MAY 1870.

The Institution of Surveyors

Is established—

1. To secure the advancement and facilitate the acquisition of that knowledge which constitutes the profession of a Surveyor, viz.—the art of determining the value of all descriptions of landed and house property, and of the various interests therein; the practice of managing and developing estates; and the science of admeasuring and delineating the physical features of the earth.
2. To promote the general interests of the profession, and to maintain and extend its usefulness for the public advantage.

The Institution consists of three classes, viz.—Members, Associates, and Honorary Members, with a class of Students attached.

A Member must be more than twenty-five years of age, and have acquired a practical knowledge of surveying in one or other of its branches as above defined, and so practised on his own account for more than five years; or be a member of a firm of surveyors established upwards of ten years, or in partnership with a surveyor of ten years' standing. Every Member is eligible for election on the Council, for election or appointment to all offices of the Institution, and entitled to all its rights and privileges.

An Associate must be more than twenty-one years of age, not necessarily a surveyor by profession, but his pursuits must be such as to qualify him to concur with surveyors in the advancement of professional knowledge. Associates are not eligible for the offices of President or Vice-President, but are eligible for election on the Council or for election or appointment to other offices of the Institution; they have

access to the Library subject to the regulations of the Council, and are entitled to vote and take part in the affairs of the Institution at all Annual, Ordinary, and Special General Meetings of Members and Associates.

An Honorary Member must be a person who, either by reason of his position or his eminence in science and experience, may be enabled to render assistance in promoting the objects of the Institution, but who is not engaged in practice as a surveyor in Great Britain or Ireland. He has the privilege of being present and taking part at all Ordinary General Meetings, and of access to the Library, but no right of voting, discussing, or otherwise interfering in the affairs of the Institution; nor is he called on to contribute to its funds.

Students, not under eighteen years of age, may be admitted by the Council on the recommendation (according to a form) of four Members and two Associates, or of the Member or Associate to whom they are or have been articled, and they may remain Students of the Institution at and during the pleasure of the Council, until they attain the age of twenty-one years, when they shall cease to be Students.

The Council may accord to Students such privileges, subject to such terms, regulations, and restrictions, as they shall from time to time prescribe.

Any person desirous of being admitted into the Institution (excepting to the class of Students) must be proposed and recommended according to a form, in which the full name, place of business (if any), usual residence, and qualifications of the candidate must be distinctly specified. This form must be subscribed by him, and signed by at least six Members or four Members and two Associates, certifying a personal knowledge of the candidate.

The proposal so made, being delivered to the Secretary, will be submitted to the Council, who, on approving the qualifications, will determine the class for which the candidate is to be presented for ballot at an Ordinary General Meeting of Members and Associates.

The following are the rates of contribution to the funds :—

	Annual Subscription. £	s.	d.	Admission Fee. £	s.	d.
Student	1	1	0		—	
Associate	2	2	0	3	3	0
Member	3	3	0	5	5	0

An Associate may compound for his annual subscription for twenty guineas, and a Member for thirty guineas.

With the view of forming a Library and Collection, all Members and Associates are expected, within twelve months after their election, to deliver to the Council an original Paper on some subject connected with the profession, or to make a donation to the Library or Collection.

The affairs of the Institution are under the management of a Council which is elected annually, consisting of a President, four Vice-Presidents, twelve Members, and two Associates. Besides the above, the past Presidents, and the President or Chairman of any local Association in alliance with this Institution, are Members of the Council *ex-officio*.

The Session of the Institution commences annually on the second Monday in November, and continues to the end of May. The Ordinary General Meetings are held on every alternate Monday during the Session. At these Meetings original communications are read on some professional subject, and their merits fully and freely discussed. Every Member and Associate has the privilege of introducing one visitor to these Meetings. Members and Associates are entitled to a copy of any printed publication issued by the Institution after their admission.

THE OPENING ADDRESS,

BY

JOHN CLUTTON, PRESIDENT,

AT THE ORDINARY GENERAL MEETING OF

THE INSTITUTION OF SURVEYORS,

NOVEMBER 8TH, 1869.

GENTLEMEN,

In accordance with the bye-laws of this Institution, it becomes my duty on this, the first Meeting of the Session to address a few words to you from the Chair, which I have again the honour to occupy. And first, let me assure the Members and Associates, that I most sincerely appreciate this expression of their confidence, as a testimony of the satisfaction with which they have viewed such efforts as I have been enabled to make, to advance the interests of this Institution, and through it, those of the profession at large.

The privilege of occupying this position, is, however, associated with anxieties and duties, which it is impossible to cast on one side. I did hope, both for your sakes and my own, that having seen the Institution fairly started, I might have retired from the more active part, which I, in common with the early Members of the Association, took during the past Session, and that some more able and energetic Member would have been elected to fill the office of President. The consideration, however, was strongly urged upon me, that as the President is eligible for re-election a second year, my refusal to serve,

if so elected, might be attributed to a want of confidence in our success, or to some other conjectural cause, and thus would indirectly injure the prospects of the Institution. I have in consequence, (somewhat reluctantly I confess from a feeling of want of power to do the work,) again undertaken the office, in virtue of which, I now appear before you. I must therefore pray your indulgence, and beg that you will attribute any shortcomings on my part entirely to inability, and not to any wilful relaxation of my efforts to serve the Institution, and ensure a continuance of its usefulness.

In my opening address of last Session,—besides indicating a variety of subjects to which I thought attention might advantageously be drawn,—I expressed, so much in detail, my hopes and expectations of the future of this Institution, and the Council, in their report, have since so fully recorded the extent to which these expectations have been realized, that, on the present occasion, there remains little to say that may be regarded either as fresh or interesting. I will therefore ask you to bear with me for a short time only.

There is abundant evidence that the Institution has, during the short period of its existence, done much good; and brought, as we are, more together, we must each have experienced those advantages of interchange of thought, which the meeting of members in every profession is calculated to secure.

Members generally must, I believe, have been satisfied with the Papers which have been read at the ordinary meetings, alike on account of the importance of the subjects treated, the able manner in which they have been handled by the authors, and the interest displayed in the discussions which have followed; and I think our volume of Transactions, will compare favorably with the publications of other professional or scientific bodies, containing

as it does, much useful information, and forming a record of the opinions of practical men on some of the most interesting subjects which are now engaging the public attention.

I have no doubt that the Papers contributed during this Session will, at least, *equal* in character those of the last; and I need not urge on our several Members the claim which the Institution has on their co-operation, not only in the preparation of Papers, but by taking part in the discussions which follow those prepared by others, at a considerable sacrifice of time; for it is only by free discussion we can arrive at correct views of the subjects brought before us.

When we see such men as the late Earl of Derby, Mr. Gladstone, and many others, finding time, notwithstanding their many public and private occupations, to contribute largely to the enlightenment and enjoyment of their fellow men, it is not possible for any of us, to plead that we want leisure to devote to the advancement of the profession to which we belong. To the public, who are our employers, we owe a large debt of gratitude, which can best be repaid by imparting the experience and information we have acquired at its cost, to those who come after us, and who have an honorable ambition to excel in a profession, which has the power, if properly directed, of adding so much to the wealth and happiness of all classes of society.

An Institution such as ours, is in need of reports on completed works, for the guidance of others in the execution of works entrusted to them. I would therefore ask all our Members, to contribute Papers of this kind, such as those, for instance, of Mr. Grantham, on the Leadon Valley and other drainage works; by Mr. T. Chatfeild Clarke, on Dwellings for the Industrial Classes; or, that of Mr. Hope, on the application of Sewage to Land.

The information with regard to many works recently executed, must be easily attainable, and can only require to be arranged and edited, while those of our Members, who are given to Antiquarian research, might, from old records or traditions, give the Institution most interesting information with respect to works, of which we now see only the results; the causes which led to their being undertaken and the difficulties of their execution, being now entirely forgotten.

To take metropolitan improvements, for example; our Member, Mr. W. Haywood, the talented Engineer and Surveyor to the City Sewers' Commission (whose name I mention especially for the purpose of offering my congratulations on the successful accomplishment of the Holborn Viaduct, one of the marked improvements of the day), or others who have occupied official positions of a like character, must have a record of experience, gained in forming new streets or other works, the costs and results of which, they could probably lay before us, without too great a sacrifice of their time and convenience.

Some of our Members, have been engaged in buying land for railways and other public works, and could tell us, in detail, the actual cost of land for such purposes, and could estimate, in many cases with some accuracy, the effect which such railways or other public undertakings have had, on the value of land in their vicinity. Other Members, have been engaged in the Reclamation of land, Inclosure of commons, Enfranchisement of copyholds, and in many other occupations within the province of the surveyor.

If it were thought useful, I would myself, endeavour to put together some particulars with regard to Disafforestation, with which I have had to do, the cost in fact, of converting large tracts of land, producing timber, to the more immediately profitable state of growing corn, or raising stock for meat, or as sites for houses, market gardens, &c.

Again, some Members have no doubt watched, and have taken part in, the progress of municipal improvements in continental and American cities, as well as in our own. They could tell us how these undertakings have answered the purposes for which they were designed, the mode of procedure in obtaining compulsory possession of property, and the system followed in awarding or ascertaining the amount of compensation to be paid for existing interests.

Then there are such practical subjects as road making, and the various appliances for drainage purposes, both in town and country; and the questions, how far particular systems have been successful, or, if unsuccessful, the causes of their failure.

There is, also, that most interesting subject, the management of woodlands. We in England, are said to know but little about this, if the rules and regulations for the education of Surveyors for the Indian Forests, issued by the India Board, are to be taken as any evidence. I will venture to say, however, (having myself seen most of the large woodland tracts in England, and many in Scotland,) that English plantations will compare, most favorably, with those of Scotland, which the foresters of that country proclaim to be the best in the United Kingdom, if not in Europe.

The Members of Council have, I think, hitherto taken a fair share of the work, for I find that they contributed four Papers out of the nine read at the Ordinary Meetings. I cannot consider, however, the information my colleagues are able to give to be, by any means, exhausted.

The history of some large London estate, which has in later years been laid out for building would be most interesting if our talented senior Vice-President, Henry Arthur Hunt, could give us the result of his experience. Another of our Vice-Presidents, (Richard Hall,) whose

early professional career was very much devoted to the improvement of land by inclosure, could give us much information on that head. Another, (Edward N. Clifton,) has had a large experience in the conversion of sites, covered with buildings, which have outlived the purposes for which they were originally designed. By his skill and knowledge, he has profitably adapted them to existing necessities, and could give us many useful details relating to such matters.

I do not forget, of course, that we have two most learned and eminent Associates, who will no doubt contribute, as they have heretofore done, their valuable quota to our stock of information.

Those zealous Members of our Council, Edmund James Smith and Edward Ryde, are, I am happy to say, preparing Papers in continuation of those on the very interesting subjects which they introduced last session. I may also mention that our Associate, Edward Smyth, has prepared a Paper on Copyhold Enfranchisements, in discharge of his obligation under the bye-laws. Our friend, Mr. E. P. Squarey, as a practical farmer and agent, will take up the question of Farm Leases, and I hope to hear that some one is prepared to re-open the subject of Dwellings for the Industrial Classes. Other Members and Associates following such good examples, we should never lack interesting matter for discussion.

An institution of this kind might, I think, be made useful both in a professional and public point of view, if it turns to account the opportunity it possesses, in having Members resident in all parts of the country, for collecting statistical information. A reliable record, for instance, should be ready to hand of all the different agricultural customs, of the history and customs of the various manors and manorial rights, as also of the various measure-

ments, weights, and the modes of dealing with land or its produce, throughout the kingdom, so that in case of any proposal for special legislation on such matters their present position could be seen.

Then again, there is the question which was mooted by Mr. Virgo Buckland at one of our Meetings,—as to the possibility of usefully influencing the progress of legislation in the passage of various bills through Parliament. I think some evenings might be devoted profitably to the discussion of such bills, and it might probably be well to nominate a small committee, who should call our attention to any matter of interest. In this direction our Associates who are parliamentary agents could materially assist us. Already, our friend Mr. J. C. Rees, has kindly undertaken to procure for us a copy of every private bill introduced into either house, which will be placed in the library for reference.

It appears that 117 Public Acts, and 159 Private and Local Acts, were passed during the last Session; and, that although so much time was occupied in discussion about the Irish Church that several Bills which were of interest to us were put on one side for the present, others were passed which, more or less, directly concern us.

The Irish Church Act, 1869, incidentally promotes the interests of our Irish brethren, and promises to give employment for some years to Architects, Surveyors, and Actuaries, whom the Commissioners are empowered to engage, and to pay out of monies in their hands, on a scale approved by the Commissioners of the Treasury. Nearly all the directions for the partition, sale, or retention, of the Church property, are based on the present estimated annual value; and property directed to be sold is, in most cases, to be first offered to the parties in possession, at prices fixed by the Commissioners. Provision is also made for arbitra-

tions, which are to be conducted in accordance with the directions of the Lands Clauses Consolidation Acts.

"The Valuation of Property (Metropolis) Act" is of considerable importance, both as regards its immediate effects, and viewed as an experiment in the direction of an equalization of Assessment, and probably of Rating, throughout the country. Every one must admit the absurdity—many have experienced the annoyance—of the assessment of their houses by two or three Committees or Boards at different amounts, for various rates or taxes, each independent of the other. Oftentimes, the assessment is raised by some zealous Surveyor of Taxes, simply by way of experiment, to see how much it can be increased, before the occupier will undergo the annoyance of an appeal. This Act then, which applies only to those Parishes which are wholly, or for the greater part, in value, under the jurisdiction of the Metropolitan Board of Works, provides that copies of the valuation lists, as made out by the overseers under the Union Assessment Committee Acts, shall be sent to the Surveyor of Assessed Taxes, and to the various authorities concerned with the county rate, sewer, and other local or general rates, who have powers of appeal, both against the total and the particular assessments of any parish, to Courts of special and general Assessment Sessions to be held by the justices. Each valuation list, when finally approved, is to be in force five years, subject to such alterations as may be necessary. Every fifth year a new list is to be made out and formally approved as before. This list is to be evidence of the gross and rateable value of the hereditaments included therein. The poor's rate, the county rate, sewer rate, and all local rates, are to be made on the rateable value, and the house and property tax on the gross value, as set forth in the lists. Another attempt has been made in this

Act, to define more clearly, the terms "gross and rateable value." In the Bill as originally drawn, it was proposed to have a "General Valuation Board," chosen from the assessment committees of the several unions, who were to settle and approve the valuation lists, with appeal to a Poor Law Commissioner, who was to hold a court at certain times. The whole of this arrangement was struck out on discussion in the House, and the Assessment Sessions by the justices substituted. It was also proposed that the gross value should not be fixed at any less sum than the rent actually paid. This obvious injustice, and contravention of acknowledged principles of fair assessment, was also struck out.

"The Poor Rate Assessment and Collection Act, 1869," provides a sort of resting-place for the ghost of the compound householder, who has been very unquiet since his abolition, under the last Reform Act. It provides that occupiers for short terms may deduct the rates from their rents, and that owners, agreeing to pay the rates for a year on small tenements, may be allowed a commission not exceeding 25 per cent., with other deductions in certain cases. This places owners in about the same position with regard to compounding, as before.

"The Sunday and Ragged Schools (Exemption from Rating) Act, 1869," requires only to be mentioned by name.

But I fear encroaching on the domain of my friend Mr. Ryde, who will, I trust, in continuation of his Paper on Parochial Assessments, give us some detailed account of these Acts, and his opinion on their provisions.

The amendments to "The Drainage and Improvement of Lands (Ireland) Act, 1863," made this year, do not especially affect Surveyors.

"The Metropolitan Building Act, 1869," removes the jurisdiction, in respect of dangerous structures, from the Police to the Metropolitan Board of Works.

It may be well also to note that "The Lands Clauses Consolidation Act, 1869," contains only a provision for the payment of fees to taxing masters, and for the trial of Jury cases in Westminster before the High Bailiff or his worthy Deputy, whose name is to be found in our list of Associates.

The time of the Legislature during its next session will probably be much occupied by the discussion, and possibly the passing, of some Irish Land Bill. Although it might be rather difficult to steer quite clear of political bias in the matter, or for us to agree how far it might be expedient for the general welfare, to legislate beyond securing a measure of bare justice, still the question of the tenure of land, not only in Ireland, but in England, is one of great interest in all its phases, and is well worthy of discussion by this Institution, on account of its intrinsic merits.

A large area of the kingdom is occupied under no special agreement, and, so long as amicable relations exist between landlord and tenant, all goes on well; but a time sometimes comes when strictly legal rights have to be ascertained and enforced. Under these circumstances they are often found to rest on some ill-defined "custom," "understanding," or "expectation," that things would go on as they had done, perhaps for the last hundred years or more. We all know how unsatisfactory is this state of things, and how each party professes a grievance in whatever way the matter may be settled. In fact, as I took occasion to say, in my remarks on Mr. E. J. Smith's interesting Paper, "all customs are antiquated, and should be abolished, and everything reduced to writing." I should like to see the following question taken up,—How far is it desirable to define, by legislation, the respective rights of landlord and tenant in the absence of a special agreement? Some of our Members, who are

Agents of large estates, could tell us what would be the effect of such legislation upon the parties interested.

A Bill was brought in during the last session of Parliament, called "The Valuation of Property Bill," applying to the country generally, the principles of that already described for the metropolis. It was withdrawn for want of time, and will doubtless be brought on again at the first opportunity. It will be well for us to watch this Bill, as it contains provisions to which, I think, some of us would object. There is a fair subject for discussion in the question,—Why should we trouble ourselves or rather be troubled, about a gross and a rateable value for assessments? Should not the estimate for *all* rates and taxes, without exception, be based on the rateable value only? The net profit rent, appears to afford the best measure of the capacity to pay the rates.

Having then cursorily touched upon a few of the points which appear to me to specially merit your attention, let me say, in conclusion, how little I feel able, as your President, to bring before you these questions in their best form, or to aid materially in guiding this Institution in the course it would be most desirable to adopt respecting them. One thing, however, is certain, that although each of us may be capable of giving a sound opinion on matters of detail coming within his own special province, we can scarcely hope, as a body, to lead or influence public opinion on the general principles of great questions, until we show, by our own acts and by the zeal and interest with which we discuss them amongst ourselves, that there is sufficient ground for the confidence which we desire the public to repose in us.

Mr. H. A. Hunt (Vice-President) thought they were indebted to the President for the very able Address he had

just given them, and for the suggestions he had made, with the view of eliciting the knowledge and experience which the Members possessed. He begged leave, therefore, to move that the thanks of the Meeting be given to the President for his Address, and that it be printed and circulated with the Transactions of the Institution.

Mr. J. H. Lloyd (Associate of Council) begged to second the motion. Some of the points, he said, alluded to by the President, were of special importance. He supposed there was no citizen of the empire who did not feel an interest (certainly none who ought not to feel an interest), in the great questions to be discussed in the next session of Parliament. Though it was quite true, that we in England were in a somewhat different position from our brethren in Ireland, with respect to the land question, still, when great principles were to be discussed, it seemed to him to be the duty of every man, to afford all the assistance in his power, to impart all the information he was able, and devote his best energies to the purpose; and if that question could be discussed here, and any information which the aggregate experience of this body could afford to the Government, could be given, no doubt it would be accepted as a most important contribution, and would re-act beneficially upon the Institution itself. He thought it very desirable that the Institution should some day obtain a Charter, and if they could secure the good will of the Government, by showing that they were able to afford valuable information, it would greatly facilitate the attainment of that privilege. With these objects in view, the Council had that evening appointed a Committee, to collect information on the subject of local customs, and the relations of landlord and tenant in England, which might possibly enable them, to lay

before the Government some practical and useful suggestions. He thought it desirable that when any question of special public interest arose, it should be immediately discussed by the Institution, previous notice being given to the Council of the intention to bring it forward. It was possible, that there might be occasions on which it was desirable to have an expression of opinion on such subjects, although it might not be pertinent to any Paper, at the time under consideration; and opportunity should be given to the Members at large, to discuss them.

The motion having been put by Mr. HUNT, and carried by acclamation, the President briefly acknowledged the compliment.

Mr. MENZIES (Member) begged to say a very few words on what he considered the rebuff which had been received from the India Government, on the subject of the examinations of candidates for employment in the Indian Forest Department. Since the last session, he had had the opportunity of going with one of the gentlemen connected with that department over some of the best managed woodland districts of England; and this gentleman acknowledged, the excellence of what he was shown. He (Mr. MENZIES) should like to see the Council of this Institution make common cause with the Council of the Royal Horticultural Society on this subject; and he hoped, they should be able to show, that the slur upon the surveyors of England, as to the management of forests, was undeserved.

The PRESIDENT remarked, that a very able report on Forests had been made by Mr. ANDREW MURRAY, of the Royal Horticultural Society, who had been deputed to inspect the Forest schools of Germany as he had previously

done those of France, and it was very desirable that the Institution should have a copy of it. He might state generally, that Mr. MURRAY's opinion was that the foreign forests would in no respects compare with the English forests and woodlands, with which he, (the President) and Mr. MENZIES, were so well acquainted. He hoped it was not yet too late, to make some stand before the India Board on this matter.

The Meeting then adjourned.

No. 12.]

THE

DISTRIBUTION AND AGRICULTURAL USE OF TOWN SEWAGE.

(CONTINUED.)

By WILLIAM HOPE, V.C., Associate.

Read at the Ordinary General Meeting of the Institution of Surveyors *on November 22nd*, 1869.

JOHN CLUTTON, PRESIDENT, IN THE CHAIR.

I have been asked to re-open the adjourned discussion on the utilization of town sewage, by furnishing a short account of some of our successes and some of our disappointments at Barking during the past season. And to this I will add such general observations as further experience has enabled me to make.

I will commence with my disappointments, or rather with a few of them, because, as they belong to the order of mischances termed by the Registrar General "preventable," were I to finish with them I should leave an erroneous impression on your minds.

With regard then to the best known sewage crop, namely Italian rye grass, I stated in the spring that, under proper cultivation, 10 crops, averaging 9 or 10 tons each per acre, would always be obtained in one season by the application of a sufficient quantity of sewage, if the grass were sown at the right time of the year, namely in the month of August. This statement I repeat now, and further experience has only confirmed me in this view; yet I am sorry to say that

in actual production I can only bring you 1 ton nearer the promised 100 than before. On my own land I have, as yet, no rye grass under sewage, but on the Metropolis Sewage Company's farm one piece of ground had been sown in the month which I had so frequently recommended, and I was in great hopes, even although it had been somewhat starved in the winter, yet that it would have been sufficiently liberally dealt with during the growing season to have given a result approaching, at all events, to the standard of 100 tons. If you consider that it is now upwards of eight years since I first began to labour towards the utilization of the sewage of London, you will better understand the disappointment that it was to me on finding that when there seemed at last to be a chance of a fair experiment, this chance should have been thrown away and the desired result postponed until the end of the ninth or perhaps tenth year. I say, or perhaps tenth year, because, as I shall presently explain, it is now fortunately in my power to make reliable quantitative experiments, independently of the Metropolis Sewage Company, who have for so long stopped the way. But as a full result can only be looked for from grass sown in the month of August, I cannot obtain that full result next year. I must wait for the year following, which will be the tenth of my labours. Let us hope that there may be something lucky and auspicious in that figure, and that the tenth crop of grass cut at the close of the tenth year of work will complete the last 10 tons required to make up the promised 100.

I have to record another disappointment with regard to maize. I had, and still have, great hopes of this as the cereal pre-eminently adapted to utilize large quantities of sewage, and to yield maximum quantities of food per acre whether for man or beast. I stated, that so forcing was the effect of liquid food upon this crop, that

I had every expectation that I should be able to ripen it in any year in the climate of Essex, because the growth of the plant in its early stages would be so hastened, that it would be able to avail itself, for ripening, of the heat which we always have in August and September. This expectation I still entertain, but with one modification, and that is, that to guard against the effect of a cold spring followed by a cold early summer, such as we had this year, it is absolutely essential that the seed should be sown in an open porous soil, so that when the sun does come, it may penetrate and warm the soil and roots of the plants in the shortest possible time. The soil in which I ripened the maize last year, and in which I have failed to ripen it this year, was a cold dense brick-earth, which was never thoroughly warmed this year at all. The three inches a day, or one-eighth of an inch an hour, as Mr. Bramwell forcibly put it, which the sewage enabled the Indian corn to grow last year for a month continuously, was never attained this year for a single day. No sooner had it struggled above the surface of the stiff earth, than the cold north winds in June nipped it, and, in fact, it was frost-bitten, so much so, that down to the middle of July, it was completely white and blanched like celery or seakale, and appeared to be all but dead. However, having entire confidence in the stimulating powers of sewage, I then commenced applying it with an obstinacy in proportion to the strength of the previous north wind, and the result was, that the colour rapidly reappeared; towards the end of July it began to grow; and, at last, in the middle of October, it attained the proportions you see in this plant, the cobs being about two-thirds formed. I have no doubt, from what I observed this year, that even in an exceptional season, such as the past, the crop would ripen if sown in an open warm soil such as I have described. As it was, the result has been in one respect

very satisfactory, for it has proved to me that maize would always be a paying crop for a sewage farmer to grow, even if it did not ripen. The piece of land on which I grew it this year was exactly the ninth part of an acre, and from this I obtained a weight of maize straw of no less than 2½ tons, although it was partially dried by the bitter north wind, which you will recollect in the latter half of October. Every ounce of this was valuable food, whether for horses or cattle, and all classes of stock are ravenously fond of it, leaving all other food to feast upon it. It is therefore difficult to place the feeding value of the straw in this state, including the half-formed cobs, at less than 30*s.* per ton, for the per centage of sugar in the straw is very large, besides which, there is the partially formed starch in the cob. It is clear that 22½ tons of such food per acre would effectually protect a farmer against any possibility of loss, and, in fact, bring him in a very handsome profit.

With regard to the calculations which I made, but which I did not venture to put before you on the previous occasion, as to the probable amount of grain to be obtained per acre from this crop, under sewage cultivation, I am happy to say that I have since been informed by Mr. Henry Evershed, the well-known agricultural writer, that these calculations are borne out in every place in the United States where there is anything approaching to a careful and exhaustive cultivation. The calculations I made were based upon the average weight of a great number of different seeds of maize, which I weighed individually. I then carefully observed the nature of the plant, and compared my observations with written accounts, and I came to the conclusion that if maize were planted at the rate of one plant to every four square feet, which I am satisfied would not be a bit too close,—and well fed,—the return in grain should amount to the astonishing quantity of from

20 to 30 quarters per acre, and this not in the cob, but after being shelled. Now, if we consider that this is a grain which weighs 60 lbs. to the bushel, and that its analysis shows a feeding value, very little, if at all inferior to wheat, it is quite clear that for stock-feeding and for horse-keep, it is one of the most profitable crops that a sewage farmer can grow for home consumption, and even if he sells it at the low price which it usually commands in our markets, say 30*s*. a quarter, he will get a return, including the further value of the straw, equal to about double that which he can hope for from the finest crop of wheat.

Among the minor disappointments of the year have been, first, strawberries, which suffer, of course, as much from cold north winds under sewage as under any other kind of cultivation; secondly, lettuces, which, under the combined influence of a cold clay soil and cold north wind, were very much retarded in their growth, and, although moderately good, never attained maximum size; thirdly, I may mention all the other kinds of market garden produce, which I tried in my own stiff land, with the exception of celery, scarlet runners, and common beet-root.

The celery, which is one of the most difficult and expensive crops to produce under ordinary cultivation, has succeeded in a remarkable degree, and I have brought here a plant as a specimen. I am assured that the rent of the rich black mould to the south of London, where the greater part of the celery for market is produced, is no less than £16 an acre. This I was informed on the best possible authority, namely, that of the gentleman who is agent for a great part of the land, and who was more struck, on a visit which he paid me a couple of months ago, by the appearance of the celery than by anything else.

Among the successes or partial successes of the season, either at the Lodge Farm or on my own ground, may be mentioned also the following:—

A crop of wheat on 4¾ acres, the land being a poor gravel, and the crop being the third crop of wheat in succession, gave just under 4 quarters to the acre of grain, weighing 61 pounds to the bushel, from an application of about 700 tons of sewage per acre; however, in the judgment of Professor Voelcker as well as in my own, this crop was starved and mismanaged at a critical period of its growth.

Two acres of oats, following two successive white crops, with green catch crops in between, received, on a poor yellow gravel, some 600 tons of sewage per acre, and yielded 10½ quarters of grain to the acre, weighing 41 pounds to the bushel.

Six acres of barley, following two successive white crops, on a poor gravel, and said to have received rather more sewage, yielded 4 quarters and two-thirds to the acre, weighing 52 pounds to the bushel.

An acre of beans received 800 tons of sewage, and yielded 5 quarters of grain.

Four acres, one rood and twelve poles of mangold received a more uncertain quantity of sewage, and produced altogether 201 tons of roots, or not far short of 50 tons per acre; but this was starved for many weeks together.

Three roods, ten poles of potatoes realized nearly £26 in the Borough Market; the quantity of sewage uncertain.

An acre of carrots, which received about 1,000 tons of sewage, realized £36 10*s.*

An acre and three-quarters of onions, which received one light dressing and two heavy ones, sold for £80 12*s.* 11*d.*, or about £46 an acre.

An acre of sugar beetroot, grown experimentally accord-

ing to the directions, as regards distance apart between the roots, of some eminent Belgian sugar manufacturers, yielded 22½ tons from the application of about 1,000 tons of sewage; but the seed was not very good, and the amount of top was enormous, and out of all proportion to the roots, partly, as Mr. Duncan believes, owing to the inferior seed, and partly, I have no doubt, owing to their being too close together. Next year, with better seed, and a distance between the roots better adapted to the particularly forcing character of sewage manure, I shall get much superior results. Nevertheless, this is, I believe, a greater weight than has been obtained by any of the farmers at Lavenham. Still it is a question whether, in view of the large returns to be obtained by the growth of other crops, sugar beetroot will be a paying crop for a sewage farmer to grow; for it must be recollected that it would not always be possible to precede it by any winter catch crop, and that it remains in the ground so late that it can with difficulty be followed by any other crop, unless it is desired to take a crop of cereals off the ground, for which, however, it would not be a very good preparation, inasmuch as full dressings of manure cannot be applied to it without the risk of reducing the per centage of crystallizable sugar, or, rather, increasing the difficulty and expense of crystallization, and, therefore, of course, diminishing the value of the root.

Many now present are aware, from personal observation, of the peculiarly sticky, ungenial character of the soil of the experimental field on which I have been working. Those who have not seen the field themselves will, perhaps, be interested in seeing this clod, which is a perfectly fair sample of the whole. Those gentlemen, however, who gave me the pleasure of a personal visit during the summer, will also recollect the peculiarly backward, unprofitable appearance that the field then presented. It is not, therefore,

without some satisfaction that I am able to produce this specimen of mangold, which I selected, on the crop being taken up, as among the best of the kind. It weighed when taken up, 31 pounds. The total crop I have not been able to weigh, as I have no weigh-bridge at Parsloes; but I have measured it accurately, and off $4\frac{1}{2}$ acres I have obtained 352 cubic yards; and the weight of a cubic yard I find to be slightly over 10 hundredweight and a half. Consequently there were 184 tons 16 cwt. in all, or just over 41 tons per acre, which would be considered a satisfactory result by a high farmer, on the ordinary system, with moderately good land, and is, I venture to submit, as remarkable a result from a sticky yellow brick-earth as the celery before alluded to.

I have said that, for the future, I shall be able to record accurate quantitative experiments in the application of town sewage. This is because I have recently taken a lease of another farm about three miles farther from London, together with a lease of the sewage of the town of Romford. I am informed that Romford contains a population of about 8,000, of whom 6,000 or 6,500 are believed to be "sewered," as the phrase is, at the present time. However, correct information will be obtained in the course of the coming year as to the actual amount of population drained by the sewers.

The farm consists of about 120 acres, of which the greater part is a light sandy and gravelly loam, admirably adapted for sewage irrigation; but, in itself, exceedingly poor land. For the land, with commodious buildings, I pay a rent of £300 a year. For the sewage, delivered upon the farm, I pay a rent which is, I believe, the largest dead rent paid for the sewage of any town, no matter what the population, up to the present time, namely, £600 a year. For instance, the Local Board of Croydon only gets about £300 a year, or half of what I pay, for the sewage of a popula-

tion nearly seven times as great as that at present drained by the Romford sewers. Nevertheless, I believe that I have got an exceedingly good bargain, as I have got the sewage for something like two shillings per head of the present population. It is my intention, so soon as I have got the land laid out, and ready for the proper distribution of the sewage, and so soon as I can procure a self-recording meter which will not become clogged with the dirt of the sewage, to commence a series of quantitative experiments, of which a correct and rigid account shall be kept for the benefit of the public.

Having this farm to lay out, which is fortunately almost in a ring fence, and having it entirely under my own control, I am anxious, of course, to make it a model sewage farm in every respect, and I have taken very great pains to ascertain the best breadth of beds in which to lay land out for irrigation. I took into consideration, first, the effect of running water in ploughing channels, in arable land; secondly, convenience for distributing an equal quantity of sewage over each square yard of the bed; thirdly, economy, both in laying out the land and in the labour of ploughing and cultivating it after it was laid out. The result of many careful observations and experiments was that the breadth which combined the most advantages was 15 feet from the ridge to the furrow, or 30 feet from furrow to furrow, with as great a length as possible, and I therefore desire to amend the statement that I made in my last Paper, to the effect that the best width of bed was from 40 to 45 feet from furrow to furrow; and I find that after the shallow ploughings and cross ploughings that may be necessary to obliterate the former cultivation, two ploughings are amply sufficient to lay the land up to the necessary slope of 1 in 25; and as two ploughings would not be considered too much for ordinary cultivation, the cost of preparing the surface for

sewage irrigation resolves itself into the labour necessary to obliterate the former cultivation, *plus*, in the case of flat land, that required to give the necessary fall along the ridge of the bed. It will therefore be seen, that further experience has only served to cheapen the process of laying out land, and that it is not one of those cases where fresh difficulties arise the more the subject is investigated.

While I am on this subject of cultivation, I desire to state my very strong conviction that every surveyor or farmer laying out land for sewage irrigation, ought to stir the subsoil and break through the hard pan formed by centuries of shallow cultivation, in order, first, to prevent water stagnating and becoming sour and rotting the roots of the crops; and, secondly, to permit of the roots of rapidly growing plants penetrating as deeply into the soil and with as great facility as possible. The ordinary subsoil plough, or any variety of it, I look upon as very objectionable, because the long base or sledge grinds along on the lower subsoil, and hardens and polishes it, or puddles it, as the case may be, and moreover it makes one deep score or rut; and that is all. I have accordingly, during the past year, made several experiments in order to produce what I may term a Subsoil Stirrer, that is, an implement which should effectually break through the hard pan, and loosen and move the subsoil without turning it up, following the plough after the fashion of an ordinary subsoil plough; and my final pattern is, I think, as nearly perfect for the purpose as possible. It is exceedingly simple, very light, and very strong, being in the nature of a cultivator, or grubber, and not of a plough. There is no sledge to produce the baneful effect upon the subsoil above described, but the "tines" or "fingers" tear the ground up and leave it loose and rough at the bottom. One of the difficulties to be encountered, was the necessity

to have, for any description of grubber following a plough, a wheel in front to regulate the depth of cultivation, and it was manifest that a wheel could not revolve in a loose furrow without becoming hopelessly clogged; so I devised the simple wheel, that you see here, having no spokes, but a solid or flush side, with an axle protruding beyond the other edge, and having a shoulder upon the axle, which fits inside a sort of rectangular cup, which is then bolted to the inside of the solid side of the wheel. The wheel then goes in the furrow after the ordinary plough, and the flush side being turned next the perpendicular side of the furrow, prevents the earth, no matter how loose the top soil may be, from crumbling in and clogging up the wheel. With this implement, and three horses, following the ordinary plough, I can cultivate 18 to 20 inches deep with the greatest ease, even where the subsoil is a hard pan of gravel resembling concrete; and I look upon this implement, or one of a similar character, as essential upon a sewage farm where steam power is not regularly employed. In my experiments with it, I was very ably and kindly assisted by Mr. Wedlake, of Hornchurch, who devoted an amount of personal attention to it, which few manufacturers would have given to so small an affair.

For the distribution of the sewage over the farm, wherever, to obtain a sufficient fall, a height has to be given to the carrier of over 30 inches, I am making use of the description of sheet-iron trough which I alluded to in my former Paper, with a slight improvement. In addition to the prolongation of the sides, to give vertical stiffness, and so to admit of a greater distance between the supports, the top of the sides will be turned over as a flange, to give lateral strength. The sides will farther be tied together every three feet by iron straps. The supports will be cut

out of pine, and will consist of a pair of uprights to take the sides of the trough, with a cross-piece to take the bottom of the trough. The uprights will spread slightly towards the base, and will be mortised into a sleeper placed about a foot below the surface. There will be openings at every 30 feet, with a simple water-tight valve and down pipe, and a shutter in the main trough, by which the farther flow of the sewage can be regulated or stopped altogether at pleasure. The sectional area of the main trough will give a discharge equal to that of an 18-inch pipe; and the contract price of the trough with supports and shutters, with two coats of paint, fixed in position, ready for work, is 6*s.* 8*d.* per yard forward, with an extra 5*s.* for each opening with valve and down-pipe, making a total, including these openings, of 7*s.* 2*d.* per yard forward, which is a triumph of economy. The contractor is Mr. Edwin Maw, the well-known manufacturer of sugar and gas machinery. The simple water-tight valve, to which I have alluded, is his invention, and is so ingenious that a short description of it may be useful. A circular opening having been made in the side of the trough, a light iron casting is rivetted to the edges. This casting is in the nature of a three-way-piece, and in form resembles the little cistern at the head of a common rain-water down-pipe on the side of a house, except that from one side projects the third way, so to say, which is the part that is rivetted to the edges of the opening in the side of the trough. The bottom of this casting fits and delivers into the down-pipe, and is slightly conical, and the water-tight valve is simply a wooden plug which jams into the conical part, a pin, with holes at the top, keeping it either partially or wholly open. These openings discharge 200 gallons a minute; and those who have had to deal with water, and know the difficulty and cost of making water-tight valves or sluices, will the better appreciate the

ingenuity which has enabled Mr. MAW to produce so complete an opening, valve, and down-pipe, for the trifling sum of 5*s*.

My lease of the sewage of the town of Romford has given me some little insight into the general conditions in which the sewage of an ordinary country town is likely to be presented; and I find that the dilution is so much less than that of the sewage of London, that one of my first stipulations in treating for the sewage was, that the dilution should be largely increased; not because I believe that the strong black stuff which I saw on my first examination, would have been too strong, chemically, for any crop to which it might have been applied, but because it deposited a black sediment which, as it dried, formed a cake upon the surface of the ground, through which no seeds could have burst, and which must have greatly injured all young crops by stopping the healthy ventilation of the soil, and, possibly, even by mechanical pressure round the stems of the young plants. This pressure is an injurious action, which the sticky brick-earth of my experimental field at Parsloes exercised largely on my unfortunate young plants, struggling for existence in the cold north wind of June last. The wind dried up the surface, and formed a coating analogous to the black cake formed by the Romford sewage, and I observed many thousands of young plants, of all kinds, mechanically squeezed to death by this action. In fact, in sewage farming, where at least the supply of sewage is abundant, the only thing that has to be attended to is, the physical condition of the soil. Its chemical condition may be almost disregarded, provided it does not contain matter actually poisonous to vegetation.

Having stated that I have endeavoured to tone down the Romford sewage to the same strength as that of London, I may mention one of the means that I have taken to do so,

as it is a means that may often be in the power of others to apply. It is simply draining all the upper part of the farm into the tank from which the sewage is pumped to the highest level. There of course is, (or rather will be,) the necessary arrangement for diverting the pure drainage water into the river, if and when it is not wanted, but, at other times, it will go back upon the land along with the fresh sewage coming down.

I should here remark, that from a farmer's point of view, the dilution of the sewage of a town should, if possible be not less than 25 to 30 gallons of liquid per head of the population, daily.

I am continually asked what I propose to do with so large a volume of liquid in the winter months. I answer there is no difficulty whatever in disposing of it. Winter is the time when the greater part of the farm yard manure all over the country is applied; and, instead of carting heavy loads of solid manure, with struggling horses, over muddy roads and sticky fields, it is simpler and cheaper to open a few sluices, and put in a few stops, and let the manure distribute itself. This necessitates good drainage,—that is all.

I will now say a few words more upon the value of the sewage at present being wasted all over the country; and I do so because this is the time of all others, as it seems to me, when the subject calls imperatively for that serious and practical attention from Parliament which it has never yet received. And I desire at this moment, when the trade of the country is depressed in almost every department, when pauperism, and starvation, and disease, and misery, are rife, and are continually presenting insoluble problems to the Government and to philanthropists, to estimate the value of sewage, not in money, but in something which, perhaps, may be even more easy to understand, namely, in loaves of bread.

Now, so far as my observation has enabled me to form an opinion, one additional quarter of wheat, or two additional quarters of oats,—I mean over and above the natural produce of the soil,—may be obtained from an application of sewage equal to that of four persons, for one year; and, striking out the scattered population of the rural districts, there exists an urban population in the United Kingdom of upwards of 15,000,000. The sewage of this population would produce no less than 3,750,000 additional quarters of wheat, or 7,500,000 quarters of oats. But, in every quarter of wheat there are 108 quartern loaves of bread; therefore, our present so-called sanitary arrangements throw away, waste, and destroy, in every year, 405,000,000 loaves of bread. But a quartern loaf of bread will feed a family of five persons, which is an average household, that is to say, it will keep their bodies and souls together, for an entire day. Therefore, 405,000,000 loaves would support no less than 5,547,945 persons for an entire year.

Is it possible to conceive of any other event, or work, or reform, or legislation, that would permanently feed a population of 5,547,945 in this crowded, inexpansive country?

Is it absolutely necessary that all these loaves of bread should continue to float down our rivers in the form of putrescent matter, poisoning fish and spreading fevers?

Of course, the expression of the value of sewage in loaves of bread, is a mere imaginary arithmetical expression, because all the sewage of a town could never, in practice, be applied to wheat; but the figure I have given above is, nevertheless, the correct equivalent, in wheat, of the sewage of the population I have taken, which, again, is within the truth; and although all the sewage of a town cannot be applied to wheat, yet, if used as any other manure is, it would produce, directly or indirectly, other kinds of food

quite as valuable to the starving thousands of this and other great cities.

I know what will be said by many,—that it is all very well to talk of the manure contained in sewage as being valuable; it may, perhaps, be a very good thing under certain circumstances for the farmer who gets it, but it will never pay for its distribution. This is the stock phrase,—"It won't pay to utilize sewage. The "*agricultural* results are very extraordinary, but it won't "pay *commercially*."

It is this unfounded superstition, this phantom, the "baseless fabric of this vision," which stands in the way of the universal utilization of sewage all over the country; which sends these four hundred and five millions of quartern loaves of bread floating down our rivers every year; which keeps up a constant drain of gold, or its equivalent; which sends our ships thousands of miles to search for that food which we might produce at home; which compels us to ransack the uttermost parts of the earth for manure to partially replace that which we throw away; and which makes us dependent for our principal fertilizing agent upon the limited and ever-decreasing deposits of manure left, for the benefit of a reckless and perverse generation, by the considerate charity of past races of thoughtful and provident penguins.

And who is it that says that "it won't pay" to convey our own manure a few miles into the country, although it does pay to convey the guano of our amphibious benefactors of a past age 9,000 miles from the other side of the continent of South America?

Is it the farmers, or the landowners, or the managers of estates, or the chemists, or any one who knows, or pretends to know, or can be expected to know, anything whatever about agriculture?

No. All who understand scientific or practical agriculture, all who understand the management and improvement of land, all who endeavour to keep pace with the strides of modern chemistry, still more, all who have any practical experience of sewage farming, all, in short, who are competent to form, or entitled to pronounce, an opinion on the subject, are unanimous in saying that it does pay to apply sewage to the land, and that it ought to be done; while there are some, and I trust the Institution of Surveyors may be among these last, who add that it *must* and *shall* be done.

"Shall" is an ugly word,—one at which, when applied to themselves, all Englishmen feel a rising in the throat, and one which is especially hateful and obnoxious to the parochial mind; but no great reform, whether social or political, is ever carried out until a band of resolute men make use of this word, and say that it "shall" be effected. The last great dearth of quartern loaves of bread in this country was when a heavy tax was levied upon them by the corn laws. A band of resolute men made use of this ugly word, and the corn laws vanished.

There is now another great dearth of quartern loaves of bread, and a still greater dearth of the money with which to buy them, consequent upon a dearth of work, aggravated by the present so-called sanitary laws. If another band of resolute men will again unite with the President of the Board of Trade in again using this same ugly word, these sanitary laws will also vanish, and proper laws will be substituted.

Mr. Bright was accused formerly of setting up a class antagonism by sacrificing the interests of the owners and cultivators of the soil to those of the artizans of the towns. Here is an opportunity for him to reconcile the two classes, by promoting their united and identical interests.

But, to go back to the "won't pay" dictum. At the recent Government inquiry into the complaints of the inhabitants of Barking, as to the effects of the discharge of the sewage of 2,000,000 of people at the mouth of their little creek, much very curious evidence was given; and the question was distinctly raised whether it would "pay" to utilize that stream of filth, which the people of Barking believed, rightly or wrongly, was the cause of that outbreak of scarlet-fever, which has since spread over the whole Metropolis, and which, at all events, offends the Barking noses and sickens the Barking stomachs. In a very brief statement, which I made at the request of the Government Inspector, I asserted that it would "pay," and pay handsomely to utilize that stream; giving a few of my reasons for saying so. But I pointed out that so long as the cry of "won't pay" was persisted in, it would be impossible to procure the capital necessary for so large a scheme as that required for London; and I complained that the Metropolitan Board of Works had thrown the weight of their authority into the scale against me, by repeating this statement in their official report to the rate-payers of London, with a view, as the Clerk to the Board afterwards explained when called as a witness, to prevent the public from attaching any value to the shares of the Metropolis Sewage Company.

In a report, written sixteen years ago to the predecessors of the Metropolitan Board of Works, by my friends Messrs. Bazalgette and Haywood, they criticized the different suggestions then in vogue for the utilization of sewage; and pointing out, truly enough, that there was not then sufficient information existing on which to base any decisive opinion, they ended by recommending the Commissioners to wait and see what some of the provincial towns might do.

A fortnight since, at a meeting of the West Ham Board

of Health, called to consider, among other things, what they were to do with the sewage of 80,000 people, having been prohibited from discharging it either into the Thames, or into the Lee, the engineer recommended them, and not unnaturally, to wait and see what the Metropolis might do.

The other day, at the meeting of the Social Science Association at Bristol, an alderman from Oxford, and a clergyman from a town whose name I could not catch, both got up and said that they had come all the way to Bristol in the hopes of being told authoritatively by the Association what to do with their sewage, but they had listened in vain for any such comforting instruction.

Thus matters have continued in this Chinese dead-lock for more than sixteen years. The Metropolis has waited for the provinces; the provinces have waited for the Metropolis.—

> "The Earl of Chatham, with his sword drawn,
> Stood waiting for Sir Richard Strachan;
> Sir Richard, eager to be at 'em,
> Waited for the Earl of Chatham."

This is the dead-weight of inertia which has to be overcome. This is the apathy which has to be combated. This cry of "won't pay" is the bugbear which has to be faced, examined, exposed, put to flight, and, finally chased and driven away. To do all this requires combination; and what more useful or appropriate work could the Institution of Surveyors set itself than to stop this waste, which is now going on all over the country?

In attempting this, it is essential at the outset to examine this cry of "won't pay," and to ascertain whether it is a mere assertion or the logical conclusion of a careful argument, based upon an exhaustive series of practical experiments. Now, this great case of the Barking Inquiry,

where the question was distinctly raised, and where the official mouthpiece of the Metropolitan Board of Works so candidly explained the anxiety of the Board lest the public should be misled, by their statements, into the natural belief that if sewage produced magnificent crops, it would therefore "pay" to apply it to them,—this great inquiry, conducted at such vast expense, may be safely assumed to have been an occasion when every fact, and theory, and argument, that could be raked together in support of the "won't pay" dogma, would be advanced with all the weight and authority with which they could be invested. Accordingly, a most formidable array of witnesses was brought forward at the public expense, with the double object of perpetuating the nuisance complained of by the people of Barking, and of refuting my statement that this nuisance could be done away with at a profit to everyone concerned. Some very eminent scientific witnesses were called to prove, first, that the sewage of two millions of people had no smell, and secondly, that it had no value; for, of course, if a thing costs as much or more than it is worth to obtain, it has no practical value.

Well, I listened to the evidence of these gentlemen, expecting to hear that they had travelled about in all directions and examined every sewage farm in the country; that they had for some years past conducted practical experiments on a working scale upon a sewage farm under their own directions; that the engineers had exhausted all the resources of mechanical science in a vain attempt to convey sewage from town to country and to distribute it over the soil at a less cost than that twopence a ton, which Mr. Way's careful analyses showed it to be worth in theory; and that the chemists had exhausted all the almost boundless resources of modern chemistry, and all the

infinite, or almost infinite, varieties of polybasic combinations in a vain attempt to increase the value of the sewage beyond this fatal twopence.

But what was my astonishment, when I found that not one of these gentlemen had done any one of these things. Most of them, indeed, were singularly unanimous in declaring that the present mode of disposing of the sewage of London—which was originally only intended as a temporary makeshift until something better should be decided upon as a final measure—left nothing to be desired; but more than one refused to be committed to anything beyond a negative statement, as to the effect likely to be produced upon the Thames itself; while Mr. Bidder very frankly admitted that, although he had not had occasion to study the question of sewage utilization, he yet considered its utilization so important and desirable an object that, in his judgment, it ought to be attempted, even if only nineteen shillings could be got back for every twenty shillings expended. But then he added,—to show both his sense of the importance of the object and, I fear, his disbelief in its attainment—that he would subscribe for a statue to any man who should solve the problem. Now, I contend that the problem was solved when the first and rudest attempt at irrigation was made in pre-historic times.

Some, however, of the witnesses took a very different view from Mr. Bidder, and maintained, that to pour sewage into a river is one of the wisest and most entirely scientific of all the inventions sought out by man; that just as the proper place for the manure of horses, and cattle, and sheep, and pigs, and penguins, is the land, so the proper place for the manure of human beings, is the nearest river.

But what say the millers and other unfortunate ripa-

rian occupiers down stream? And what says the Court of Chancery?

In the case of the Attorney-General *v.* the Birmingham Town Council, the Court said they would not allow even the convenience of an entire population to override the rights of one individual complainant; while, in the case of Blackburn, the present Lord Chancellor said, "that the notion of collecting all the sewage of large towns and pouring it into a river, without the slightest attempt to clear it of any of its grossest materials, was simply monstrous. Of what use was it now for the Corporation to tell the Court that they were anxious to abate the nuisance as soon as possible? They had no right to commit a nuisance, and then say, 'Give us a little time and we will put an end to it.'"

When a sailor wishes to describe a peculiarly desperate situation, he says that a man is between the Devil and the Deep Sea. Now, if we substitute for the chief enemy of mankind the Court of Chancery—and there are some persons who would think the substitution no amelioration—this description very accurately defines the present position of most of the towns in England. Unless they utilize their sewage in some way or other, the deep sea, far away from all oyster beds and bathing machines, salmon fisheries and salt pans, is the only place where the Court of Chancery will allow sewage to be discharged; and even in such a case as this, I am strongly of opinion, that if a respectable and duly qualified resident mermaid or water-baby applied to the Court for an injunction, the present Lord Chancellor, who is such a conscientious disciple of Mrs. Doasyouwouldbedoneby, would decide that the petitioner had a *locus standi*, or, perhaps, *locus natandi*, and would prohibit the urther pollution of the deep sea.

But, in the case of London, what says poor Father Thames? Poor old fellow! for many centuries past he has had to undergo so many indignities, that it was apparently considered that one more could not do him any very great harm; nevertheless, this last piece of ingratitude seems to have been too much for him, and this fatal stream of sewage seems to have been the last drop that made his bitter cup overflow; for his official spokesman, the Solicitor to the Conservancy, has just inserted an advertisement in the *Times*, giving notice of a Bill that he is going to apply for, to Parliament, this next session, "to prohibit the discharge of solid matter into the river Thames from the sewers and drains of the Metropolitan Board of Works, at Barking, in the county of Essex, and at Crossness, in the county of Kent, and from any other sewers or drains belonging to them, or any other body or persons; and to compel the Metropolitan Board of Works to deodorize, or otherwise render innocuous the effluent waters or other liquid matters allowed to flow into the river Thames."

I smiled when my eye caught this advertisement,—this cry of anguish from Father Thames. "Hullo! old gentleman," said I, "deodorize the sewage of London indeed! Why, if it 'won't pay' to *utilize* the sewage of London, how do you suppose it can possibly pay to *deodorize* it?" Then I began to remember what the Court of Chancery had said in one or two cases, and began to think that perhaps Parliament would not care whether it "paid" or not, to do what the old fellow wanted, and would say that he had as much right to be heard as anybody else. But the dry-weather sewage of London, north of the Thames, is alone sufficient to fill a lake of 92 acres in area, 3 feet deep, every 24 hours; so how is it within the remotest bounds of practical possibility to "deodorize" this enormous mass, unless by allowing it to deodorize itself in flowing over and through the land?

In fact, it is quite plain that the days of the existing state of things are numbered, and that the utilization of sewage "has got to be done," as the expressive Yankee phrase goes, and "done" it will be, for truth will triumph in the end, in spite of all opposition, and all assertion, and all apathy,—which latter is so often the greatest impediment to any improvement. But it is a question of time, and of a very long time, unless outside pressure is brought to bear; for the British Government, and the British Parliament, and British "Sewer Authorities," are among the most immovable of human organizations. It is their boast that they possess no initiative, that they leave social improvements and reforms to "private enterprize" and "individual energy," which fine sounding phrases are too often used merely as specious excuses for doing nothing. Have we not recently seen, in the case of the St. Pancras so-called guardians, a spectacle such as could be found in no other country in the civilized, or even half-civilized, world? A set of uneducated shopkeepers openly defying one of Her Majesty's ministers, riding rough-shod over a medical officer of unexampled patience, bullying every man who tries to do his duty, and successfully carrying out, for months together, their projects of torture and slow murder, by simply opposing to what is, by a figure of speech, called "the law of the land," a stolid, jeering, scoffing *non volumus*. This is the natural result of the shuffling, illogical system of "permissive legislation," by which Parliament has got rid of so many disagreeable questions, and unquiet persons, of late years, and by which Parliament virtually says, "We have made use of our great and exceptional means of obtaining information, and we have satisfied ourselves that it is necessary that a certain thing should be done, and that local authorities have misunderstood, and lamentably neg-

lected, their duties for years past; therefore we order"—what? that they shall forthwith do this certain thing that they have so long neglected? Oh dear no, that would be interference with the sacred principle—sacred to dirt and manslaughter—of local self-government; but, "we ordain that—they may do it if they like!" Truly a more utterly irrational and comical *reductio ad absurdum* was never devised, even for a "screaming farce."

But yet this state of things is a hard, stern, grinding reality to the populations of our big towns. We are surrounded by pauperism, and starvation, and disease, and misery, and yet there are endless streams of food-producing manure flowing down our rivers, draining away the hard earned wages of the artizan and the capital of his employer, undermining his health, and spreading desolation in the garret, which he has been driven by disease and loss of work, to call "his home." "More manure" means, to the agricultural labourer, of whom we have heard so much lately, more work, and better wages, and a better cottage, and some of the commoner luxuries of civilized life; and all this again means more work and cheaper food for the artizan.

I say, therefore, that those who obstruct the utilization of sewage—who repeat this meaningless but paralyzing phrase, "it won't pay," have much to answer for, and incur a grave responsibility to the country. And, after all, it is *so* easy to find objections to any new improvement—to look wise—to shake the head—to wish it every success but call it chimerical, while all the time knowing no more about it than, to use a homely phrase, a cow does of snipe shooting. Yet not one of the witnesses at the Barking Inquiry, who pooh-poohed the utilization of sewage, had any real knowledge of its agricultural use at all. This

is a strong statement, but it is the truth, and the more widely it is known and admitted to be the truth the better.

But, in fact, it is no wonder that Railway and Hydraulic Engineers (in the ordinary sense) should not understand the agricultural use of sewage. It is not, or, at least, has not hitherto been, in their province, and there are only two or three places in all England where they can learn anything of it. Who would think of asking a shipbuilder whether in his judgment it pays to bring the guano of pre-historic penguins 9,000 miles to apply to wheat in the county of Essex? An engineer who brings water into a town, is not expected to understand, and does not understand, all the hundred and one manufacturing uses to which that water is put, and if I were a manufacturer, I should never dream of reproaching him for his ignorance; but if he said that water was not applicable to the purpose for which I required it, and opposed my getting it, I should then complain very strongly.

Accordingly, I do not complain that engineers, as a rule, are ignorant of sewage farming; "Every man to his trade," is a good old saying, and they are not sewage farmers. But I do complain that, although ignorant of all the details of the system, some of them should, nevertheless, assert that it "won't pay."

That the Metropolitan Board should foster this heresy does, indeed, seem strange, but yet it is generally the case that any reform, or improvement, or invention, is opposed by the very men who are most interested in its success. The Board, indeed, refine upon the heresy, for they draw a distinction between agricultural and commercial success. They acknowledge, for they cannot deny, the effect of sewage as a manure, and they do not dispute the value

per ton of the sewage, as ascertained by the chemists; but they say, that although it produces splendid crops, and is, therefore, worth practically to the farmer what the chemists say it is theoretically, yet that, for some mysterious and inscrutable reason, it "won't pay" to utilize it; that it is an *agricultural* success, but a *commercial* failure. But what is this fine distinction between commerce and agriculture? Agriculture is a branch of commerce just as much as cotton spinning, and if sewage farming is an agricultural success, it is *ipso facto* a commercial success; so that, to say that sewage utilization is an agricultural success, but a commercial failure, is mere baseless assertion, though it has now been reiterated so often by those who use it, as to be mistaken by them for argument. It is a paradox which not only appears fallacious, but is utterly and egregiously fallacious.

What the Board probably mean to say is, that, although the utilization of sewage is an agricultural, and therefore a commercial success, yet, that it is not a *financial* success. This, in the case of London, is unfortunately only too true; and it is likely to remain true, so long as the Metropolitan Board try, as the clerk explained, to prevent the public believing that the utilization of sewage is an agricultural, and therefore commercial, success. But there are other towns, Romford among the number, where the success is already complete; and, as the agricultural value of the sewage of London north of the Thames (as undenied by the Metropolitan Board) is over £1,000,000 sterling per annum, while the cost of its utilization, including interest on all the capital required, and all other expenses (as also, I believe, undenied by them), would only be £100,000 a year; surely its utilization would be one of the most complete successes that the unassisted mind of man can imagine, whether

regarded agriculturally, commercially, or financially; botanically, horticulturally or leguminosiastically; enterologically, stercoralogically, or cloacinalogically; Governmentally, Localgovernmentally, or Metropolitanically.

Such are briefly the facts of the case; and the prejudices to be overcome, and the good to be gained, being both so great, I appeal to the Institution of Surveyors as being the body, of all others, best able to judge of the agricultural practicability of utilizing sewage, to take up the question with all that practical knowledge and hard common-sense which are so especially the distinguishing characteristics of the profession; and, in brushing away the cobwebs which surround it, they will earn the gratitude of all classes of society. They will, moreover, not speak in vain. The deliberate expression of their opinion on such a subject will command the confidence of the whole country, and towns will no longer wait, bewildered by the uncertain sound of the Government trumpet, but will at once stop the wicked waste now going on in all directions, and aggravating, so cruelly, the distress among the lower classes, already suffering from the accumulated results of inflation of credit, bubble companies, wild and reckless speculation, adulteration of manufactures, short weight and measure, trades-union strikes, and foreign competition.

Mr. W. Menzies (Member) thought the results of Mr. Hope's operations, which he communicated from time to time, were of the greatest assistance in deciding on the proper course to be followed in utilizing the sewage on the land. This he might say was, at present, an ill-understood part of the process. Mr. Hope had been experimenting upon London drainage, and so far had undoubtedly produced great results; but the great difficulty at the root of the whole

question was, that the ratepayers of towns must bear the burden. However much the community at large was interested in the result, the ratepayers would look to see what they were likely to get by it, and in what position they would stand when they had delivered the drainage at certain outlets. Hitherto, they had concluded that their work was done when they took the sewage to the large rivers; but now, the burden fell upon them of taking the sewage away from the rivers, and delivering it upon land prepared for it. It was not sufficient to tell them that under the system of sewage irrigation, the products of the soil would be increased four-fold. What they wanted to know was, who would take the drainage at the points at which it was delivered, and undertake the responsibility of keeping the rivers pure? It must be borne in mind that the sewage of a town was not, like guano and other manure, to be hawked about the country, but could only be taken to a certain definite spot, and the right to do so must be obtained in the face of all local interests, and would, probably, involve compensations and payments of various kinds, all of which must be made before a penny could be realized upon the outlay. Nor could they in these cases deal with the sewage under the conditions on which Mr. Hope was now using it,—viz., pumping a certain quantity only upon the land, and letting the remainder pass into the river. In the interest of the community, this would not be sufficient for the drainage of towns; *the whole* must be taken. It appeared to him that the best way of meeting this difficulty was by separating the rain-fall from the sewage, which system approached nearest to nature, and was the right principle to be adopted, both in the interest of towns and for the purposes of agriculture. Mr. Hope had stipulated that

the quantity of flushing water in the case of the black Romford sewage, should be raised to 25 or 30 gallons per head of the population. This was no doubt the proper amount of dilution, and, as Mr. Hope said, the right thing agriculturally. He wished that gentleman had told them what he would have done had the Romford people made him take and pump all the rain-fall, in which case, he might sometimes have had to deal with 1,000 gallons per head.

Mr. Hope would say at once he would rather *not* have the rain-fall. He was entirely converted to Mr. Menzies' views on that point.

Mr. Menzies was delighted to hear it, for he felt that the favourable opinion of such an authority as Mr. Hope was a strong confirmation of his views. In the case of the sewage of Aldershot Camp, the tenant of the land on which it was distributed could not manage to deal with the large quantity of storm water that was brought down with the sewage through two 18-inch drains. It overflowed and ran into the adjoining stream, which was already in flood. The result was, that a nuisance was created, the usual injunctions followed, and a system of drainage, on the "separation" principle, was constructed. The nuisance was abated, and the crops on that land were as good as anything Mr. Hope had grown. In his position, he had hitherto been unable to discuss publicly these matters in reference to Aldershot; but a valuable report to the Government, on the sanitary condition of that place, had just been published, and gave full information on the subject; therefore, he was now free to allude to them.

Colonel G. A. Leach (Associate) remarked that many towns, in considering their system of sewerage, followed the best professional advice they could obtain at the time; but, unfortunately, further experience and the progress of events sometimes showed that the best advised schemes required modification. No doubt a grave responsibility had now been thrown upon ratepayers, which would involve them for a time in some expense. There was a strong public feeling that our rivers must be freed from pollution, and that the sewage must be put upon the land, though it might not, at first, pay to do so. He had the pleasure of visiting Mr. Hope's farm at Barking last summer, and was struck with the facile way in which the sewage was distributed, and its effect upon the crops. He thought that, in many cases, the expense would not be so great as was imagined; for, in some instances, no doubt, land could be taken below towns, situated on a river which had a sufficient fall, and the sewage would be carried to the land by gravitation alone, without pumping. Colonel Ewart, who was sent by the Home Office to report upon Oxford and Abingdon, where it was alleged that the sewage could not be got rid of, dwelt strongly in his report upon the fact that, in Bedford, they had a system of separating the rain-water from the sewage; and he (Colonel Leach) had no doubt that would be found to be the proper mode of proceeding.

Mr. A. Savill (Member) said it would be of great practical value if Mr. Hope would give some exact information with regard to the entire expense of cultivating the crop of mangold of which he had shown a specimen.

Dr. Voelcker (Visitor) said, in reply to a question from Colonel Leach, that when clay soils were properly subsoiled

and drained, so that water could freely percolate, as through a sandy soil, they were even better adapted for the reception of sewage than the latter, and the crops, generally speaking, would be better. The reason was simple. In clay soils were found in great abundance all those mineral matters which plants take up as food; whereas, there was a deficiency of mineral plant-food in light soils, and the excess of nitrogenous matters in sewage produced over-luxuriance of growth in the plants grown on light sandy soils. In clay soils the excess of mineral matters counterbalanced the excess of nitrogenous compounds in sewage, and more healthy and heavier crops could be obtained, by means of sewage irrigation, on well-drained and well-marked clay soils than on light sandy soils. When he visited Mr. Hope's farm in the spring of this year he was then afraid that the crops would not have been so good as they have turned out, the soil being such that any one would at once condemn it as being most unsuited for the reception of sewage. That the sewage had not percolated through the soil to any great depth was manifest from the fact that the roots of the beet, sent to him by Mr. Hope, had a strong tendency to turn upwards, and to bending round, as if they had gone in search of food in the upper layers of the soil. The land, therefore, was not in a proper state of cultivation: it was not subsoiled properly; and only a small portion of the land benefited by the sewage. Mr. Hope's land contained a large proportion of sand in a very fine state of division. The particles amalgamated like cement when water was put upon them, forming one uniform mass, and so prevented the water from percolating. The greatest attention should be paid to stirring the subsoil, so that the sewage could find its way into the interior. To deodorize sewage in very large quantities was impracticable. The land was the proper deodorizer; and he believed the ne-

cessity of putting the sewage upon the land would exercise a very powerful influence on the general agriculture of the country. The clay lands generally, throughout England, were miserably cultivated. When it was shown, by the application of sewage on proper soils, what wonderful results might be produced, agriculturists would, in future, pay more attention to the working of the land.

Mr. Tuckett (Member) remarked, that if they referred to the Transactions of last session they would find that it had been stated in this room that not only was it unnecessary to drain clay land, but that it was positively injurious to do so; and that, at Croydon, they had to take up the drain-pipes, because the sewage found its way into the drains without being deodorized. He would like to hear the opinion of Dr. Voelcker with regard to this statement.

Mr. Lawson (Visitor) observed, that sewage applied to clay land did, in some cases, find its way into the drains in an impure state. At Tunbridge Wells he had found it necessary to stop the direct communication between the surface of the land and the drains, in order that the sewage might go sufficiently into the subsoil before it entered them. The drains were about three feet deep. At Chorley, in Lancashire, where the subsoil was a very stiff clay, the land was drained about three feet six inches deep; and, although the surveyor had taken the precaution of puddling on the top of the tiles, a portion of the sewage still found its way into the drains in an objectionable condition. In the case of the Colney Hatch drainage, where the land was stiff London clay, Mr. Lawson had had it dug two spits deep, first taking out nine inches of the soil, then breaking up the subsoil to

another nine inches, and replacing the soil. He hoped, by that means, to get eighteen inches of soil and subsoil which the sewage could percolate. He therefore thought the proper mode would be to drain and break up the subsoil of clay land, but by some means prevent the sewage from getting into the drains too quickly, and in an impure state.

Dr. Voelcker remarked, it was just the difference between well cultivated land and ill cultivated land. He knew localities in which the drainage water was always coloured after the manure application until the steam plough made its appearance, when the water ran from the drains so clear that one might drink it. The sewage was perfectly deodorized, showing, that by breaking up the clay subsoil, and allowing the water to go through, the land had the power of deodorizing completely.

On the motion of Mr. J. H. Lloyd, the discussion was adjourned till the next Meeting.

AT

THE ORDINARY GENERAL MEETING

Held on Monday, December 6th, 1869,

JOHN CLUTTON, PRESIDENT, IN THE CHAIR,

The discussion on Mr. HOPE's Paper "On the Distribution and Agricultural Use of Town Sewage" was resumed by

Mr. J. H. LLOYD (Associate of Council), who said that he had moved the adjournment of the discussion rather to prevent it from being brought prematurely to a close, than from any presumption that he would be able to afford information to this Society on the subject itself. His object in extending the discussion was simply to elicit such information and suggestions as might be practically useful on a subject of such national importance, which was essentially *the* economical question of the day, and the one which required the most thorough ventilation and discussion. He believed, the more it was discussed, the more unanimous would be the opinion that the application of sewage to the land was the only effective mode of utilizing a most valuable product, now creating a nuisance, which would not exist if it were applied to its natural and legitimate purposes.

Mr. T. MARR JOHNSON (Associate) remarked, that although Mr. MENZIES and Mr. HOPE had looked at the subject each from his own point of view, (Mr. MENZIES having paid more especial regard to the engineering problem

of getting rid of the sewage, and Mr. HOPE to its utilization) each, by quite different processes, had arrived, practically, at the same conclusions. There were one or two points which were not quite cleared up to his mind, particularly that which he understood to be raised by Mr. BRAMWELL, *viz.*,—What was the minimum quantity of land of a given kind, required permanently, to absorb a given amount of sewage? The other, more of an engineering character, and of vital importance, viz.,—the ventilation of the sewers,—which, in dealing with the separate system would probably be a little more difficult of attainment than under the combined. It was said that since the outfalls of the Metropolitan Board had been constructed, very large quantities of deleterious gas had accumulated in the upper reaches of the sewers, in consequence of this extension; the theory being, that the sewage which under the ordinary system was conveyed directly into the Thames, passed into it practically undecomposed, but that in its journey down the long tubes to Barking, it had time to decompose, and that the gases rose to the upper end of the sewers, escaped, or entered houses, and became an intolerable nuisance. This, he apprehended, might be greater under the separate system than under the combined. The engineer and the chemist would, however, doubtless be able to devise means of neutralizing such an evil if it arose. Another point which was not clear to his mind was whether the rain-fall discharged from separate sewers, charged, as it often would be, with the impurities of streets and yards, was fit to be turned into the rivers, and if not, whether some means would not have to be provided for the purification of such surface water. He did not know whether it had been clearly demonstrated that any land was capable of taking the whole, both of the sewage and of the water necessary for flushing the drains under all circumstances, because it was clear this quantity would not be constant. In districts where the ground had sufficient

natural fall, the sewers would practically clear themselves; in flat districts, they would require a large amount of flushing to keep them clear, which might possibly so dilute the sewage as to make it valueless.

He thought very few could have listened to what had been said on the separate system without becoming converts to it. He was not aware whether the principle had been thoroughly carried out in any town; if so, it would be interesting to know what was the difference between the cost of draining it on the separate and on the combined systems.

For years past there had been much discussion as to whether sewers should be of pipes, or be built of a size sufficiently large to admit of men entering them to cleanse them. Though there might be many cases in which it was necessary to adopt the latter mode, he had no doubt the sewer would cleanse itself, and would be more easily ventilated if it were of the exact size necessary to carry the sewage, and for this reason the pipe system recommended itself. He doubted, however, whether the pipes could be so closely jointed as entirely to prevent the escape of sewage, and he believed that, in many instances, it *did* so escape to some extent. This escape might be prevented in a great measure by the adoption of the separate system; for if the sewer were required for the sewage only and not for drainage of the soil, it might be made tight from the house to the outfall.

He thought it would not be a simple matter to devise a separate system of sewage for London. There was an enormous quantity of water but slightly polluted, to be dealt with, and which could not strictly be called sewage; but still it contained sufficient matter in suspension to considerably contaminate the Thames if passed into it without a settling reservoir or other purifier. To separate this entirely, he thought, would be exceedingly difficult, and would require an independent system of long outfall sewers.

Under the existing system considerable quantities of sewage were discharged into the Thames in London. He had met with immense deposits of solid matter in the sewers. He remembered especially one in Gloucester Place, Hyde Park, where there was an accumulation of something like 2 feet in depth; so foul, that the men who went in to clear it away were so much affected by the noxious gases that many of them had to be taken to the hospital. He could quite understand, that in a period of drought, there would be a great deal of this deposit; and if that were followed by heavy rain-fall, the bulk of the solids, so lodged, would be driven into the Thames.

He believed that the method of disposing of the sewage at Barking was the right one; bearing in mind that Mr. Hope had been able to help himself to the quantity he wished and of the quality he desired, no doubt the same facilities would be afforded, on an extended scale, by the prolongation of the outfall sewers eastward from Barking; and he (Mr. Johnson) had no doubt that in a few years we should see the whole of the large quantity now discharged at Barking profitably utilized, and producing enormous crops, approaching in bulk those which had resulted from Mr. Hope's interesting and profitable operations at Lodge Farm.

Dr. Buchanan (Visitor), responding to a call from the President, said that he came rather as a learner than with the intention of speaking upon the subject himself; but it seemed to him, looking at the matter physiologically, that they had everything to assure them of the ultimate success of the measures which were now advocated. He conceived that the original way in which vegetables got their sustenance from animals was, that all animal matter became decomposed into carbonic acid and ammonia, which plants took up by their leaves from the air and by their

roots from falling rain. It was an enormous step,—as great, if not greater, than that they were preparing to take now,—when somebody ascertained it was not necessary that animal substances should decompose to that extent, but would, when put to the roots of plants, of themselves, without such vast decomposition, afford the sustenance required. The first noble savage who discovered that, made a beginning of what they were aiming at to-night. The manure of the lower animals was acknowledgedly a most important means of increasing the vegetation on which the animal fed. Only in the case of man did custom sanction the waste of manure. They might probably assure themselves that the refuse which a man gives off day by day, would feed as much vegetable life as would suffice in turn to feed him. As soon as they could realize that fact and set to work on such a basis, it would be considered as stupid to waste the excreta of men as it would now be considered to throw away the excreta of the lower animals. Mr. Hope says that, in an economical point of view, the system of sewage application he has adopted is successful, which means, no doubt, that it is commercially successful, as far and as often as it can be brought to use at a cheap rate; for, of course, if the cost of bringing it to the plants were outrageous, it might be an agricultural success while yet a commercial failure. As to the means of bringing the material to the plant, he would speak with every possible guardedness and reserve; but at present it was clear they must have recourse to water carriage for the large towns, which were already provided with water, and in which the water closet system was already extensively in use. Whether or not this system was indispensable, they could make no change in it without a revolution that they were not yet prepared for. The circumstances and situation of each town would mainly determine whether food could be applied economically to the plant by means of sewage irrigation; the necessity of pumping and of dealing with rain-fall

must, in many cases, make it questionable whether the town sewage could be conveniently carried to the places where it was wanted. There was no abstract reason, however, why water should be deemed the only vehicle for carrying the excreta to the land. There were means of approved value, such as the earth closet system, for deodorizing and using excreta in other ways than by water carriage. The manure produced by the earth system was portable, and could be disposed of, not only on the one particular bit of land which might be adapted by its position and level to irrigation, but could be distributed over the country without offence, just as guano was. He had no doubt a large development of that system was in the future, and would turn out to be a considerable advantage to the farmers of the country.

Mr. T. Marr Johnson asked whether anything else than human excreta was absorbed by the earth in the closets, and how the slops of the houses were dealt with.

Dr. Buchanan replied that in all the places he had seen, the slops were dealt with by a system of drainage upon which the earth closet system was engrafted, so that what went down the drains was available for irrigation. In the case of the camp at Wimbledon, both liquid and solid matters were disposed of by means of the earth closets.

Mr. E. Ryde (Member) said that it was desirable to bring this discussion to some practical issue. Mr. Hope had shown how authorities in towns were waiting, each anxious to see what the others would do; for they wanted to be satisfied as to the best mode of disposing of their sewage. He would propose to pass a resolution, "That, in the opinion of this Institution, the only efficient mode of disposing of the sewage of towns was to utilize

it upon the land." Of that he had no doubt, but how it was to be done most profitably, he did not think that any of them had had sufficient experience to decide. He was sorry to hear that Mr. Hope had given so large a rent as £600 per annum for the sewage of Romford. Such a rent was a large interest upon the capital required for taking the sewage down to the farm. He thought the town itself should have borne some part of the expense of utilizing it, until it could be seen that it was worth the while of people to take it.

He did not believe the earth closet system to be applicable to towns, but in villages he had seen these closets acting satisfactorily, even in the upper floors of houses, where water closets had previously been. He did not believe that people would have earth closets if they could get water closets. He himself, after two years' experience, had done away with two of them on his own premises. He had no doubt that the earth closet system could be applied with advantage to villages, if under the control of a person appointed both to supply the dried earth and take away the soiled. Mr. Hope had hardly shown the relative expense of farming under sewage irrigation and the old-fashioned system of agriculture. He believed, for instance, it would be found that a higher rent would be demanded for land for sewage purposes, than would be the case for ordinary agricultural purposes. There was a prejudice against these sewage farms, which were regarded by some as a nuisance to the surrounding property. This additional rent must not be lost sight of in such a calculation.

Mr. W. J. Beadel (Member) said he thought the surveyor scarcely competent to give an opinion as to whether the sewage should be applied in a solid form; whether the storm water should be mixed with the sewage; or whether

it should be applied to the land in the form in which it was obtained from earth closets. These were questions for the engineer, and depended on a variety of circumstances. It must be regarded as a settled point, that the system hitherto pursued of not only wasting the excreta of man, but, what was worse, of discharging it into the rivers to be a nuisance and destroy life, must be discontinued. Dr. Buchanan had forcibly stated the wise provision of Providence, whereby every man and other animal emitted as much productive matter as he took in. Sooner or later, the sewage of the country would be utilized; but whether the liquid or the earth closet system was the right one, was not a matter of so much interest to surveyors. It must come before them, however, in some shape, because it materially affected the value of land, and a surveyor who acted as the agent of large properties would probably find owners strongly objecting to a scheme for the distribution of sewage on their property, to the ruin, as they imagined, of their estates. He considered the point which Mr. Johnson raised in the question he put to Dr. Buchanan a most important one, because an enormous amount of matter besides slops was thrown down the sinks. It seemed that Mr. Hope was content with the "olla podrida" of sewage in its liquid state, and which appeared to him a better form of application than using the contents of earth closets, and having to provide by drainage for the liquid refuse of the houses. He had the pleasure of being on Mr. Hope's farm when the Land Surveyors' Club was there by invitation. Things did not appear very promising at that time; but the crop of mangold had certainly turned out to be a marvellous one, and exceeded anything that could have been obtained by the ordinary application of manure. Mr. Ryde had called attention to the probable increase of rent for land taken for sewage farming: if it was true that the farmer could grow with sewage very much larger crops

than without, it could not be a question of rent. The high rent which Mr. Hope was stated to pay for the Romford farm was nothing, compared with the returns he anticipated obtaining.

Mr. E. P. Squarey (Member) said that all plans for dealing with sewage necessarily involved considerable expenditure in the construction of sewers, and in some cases, a further outlay for lifting the sewage to the necessary height; but if the capital that would be required for these arrangements were invested at a reasonable per centage, and the interest applied to the development of the earth closet system, he thought the balance would generally be in favour of that system, where it was applicable. He could not help feeling that the earth closet system, applied under such circumstances as he suggested, provided an economical and convenient form of manure, and the difficulty of dealing with the slops might be met by a larger proportion of earth. He hoped the system of the application of sewage to the land would be a successful one, but he admitted that, as yet, he was somewhat doubtful about it. Mr. Hope's experience in this matter was of the greatest value to the country at large, and he thanked him sincerely for the energetic way in which he had carried out his operations. His own agricultural experience showed him, that the application of large quantities of artificial manure, such as nitrate of soda, guano, phosphates, &c., had a tendency to produce diseases in cereal crops which they did not get in grass; and, therefore, if he were in Mr. Hope's position, and going to undertake the dispersion of a large quantity of sewage, he should be inclined to apply it to grass and root crops instead of to cereals.

Mr. Virgoe Buckland (Member) remarked, that as the

Court of Chancery had decided that the sewage must not be sent into the rivers to pollute them, and as it must go somewhere, and there was no other place for it but the land, the question really was not whether it would pay to put it on the land, but in what way it could be so applied at the smallest cost. Where the sewage required pumping to a higher level it was a question whether it would pay commercially, but where gravitation could be employed he had no doubt sewage might be profitably applied to the land. He was quite satisfied, from what he saw on Mr. Hope's farm, that it would pay, and he agreed with the last speaker, that it was better suited to roots and green crops than to cereals.

Mr. C. M. Bidwell (Member) said, that there appeared to be great differences of opinion on the question of earth closets. There had been no communication to the Institution on the subject, and he thought if Mr. Moule, who was much interested, would read a Paper on it before they came to any definite conclusion, it would further elucidate the matter, to the benefit of the community at large. With regard to the application of sewage, he had read Mr. Hope's very able Paper with great satisfaction, but it did not give the quantity of sewage applied, per acre of land, nor the number of acres it required to take the sewage of a town, per thousand of population. On these and other matters, they were not sufficiently informed to come to a definite conclusion; and there were other points on this important question which ought to be more thoroughly ventilated than they had been at present. He lived in a small town (Ely), where they had had the benefit of a Board of Health for some years, and where the mortality had been reduced from 23 to 16 per thousand in consequence of good drainage and water supply. They had independent sewers for the sewage of the town and for the

surface drainage and storm water. A plot of ground had been taken at the lower end of the town, where the sewage was received into a tank of sufficient capacity to allow the solid matter to deposit itself, and when the water was tolerably clear, it was allowed to run off into the river. The deposit in the tank was taken out, mixed with the street sweepings, and sold; so that it nearly paid the cost of collecting the sweepings, and kept the streets clean. If the system of utilization of sewage, suggested by Mr. Hope, was generally carried out, it would be a great boon to the community at large.

Mr. G. Chapman (Member) mentioned an instance within his own knowledge, where the sewage of a workhouse was deposited in a tank, and, as soon as it became full, what little water remained was drawn off, and the adjoining tank was then used. They went on thus, alternately filling the tanks, for years, the sewage being used upon the garden ground attached to the workhouse, where the best vegetables were grown, without any expense for manure. But one day this system was condemned as a most imperfect one by a sanitary officer, who insisted that the sewage of the workhouse should be carried into the sewers. The consequence was that they were obliged to buy manure for the garden, and were not able to grow such good vegetables as before. He agreed with Mr. Bidwell, that it was desirable to utilize the solid matter of the sewage in the way he had described.

Mr. Thomas Bennett (Member) remarked, that during the last few months he had had the opportunity of visiting the estate of Sir Anthony Rothschild, where the earth closet system was in operation almost throughout the village, which was situated quite in a hole, and had been previously regarded as one of the most unhealthy places in Buckinghamshire. The system appeared to work very perfectly,

but, as Mr. Beadel said, it required careful and efficient management and supervision. The dry earth, which was often used three or four times over, was bought by the farmers at 50*s.* per ton. Altogether, the system gave him so much satisfaction that, acting upon his advice, the managers of a large middle-class school, intended for 200 and 300 boys, substituted earth closets for a system they had in contemplation, and they were now answering exceedingly well. Of the commercial results he could not speak, but as far as sanitary purposes went nothing could be better. A man was employed to supply the earth, and remove the soil as often as was necessary, and there was nothing offensive in the matter when removed. He had had some experience of sewage irrigation in the Fens, and in the case of one village with a population of 2000, where the sewage was pumped and afterwards flowed over the land by gravitation, there was nothing offensive on the surface of the land, in proof of which he had seen sheep feeding close up to the place where the sewage was washed on. He concurred in the opinion already expressed that sewage was better adapted for grass and root crops than for cereal plants.

Mr. F. Vigers (Member) said, that before such a resolution as Mr. Ryde had suggested could be passed by this Meeting, there were several points which had arisen in the discussion which he thought should be more thoroughly sifted: for instance, there was a suggestion made by Dr. Carpenter, who, as they all knew, had taken an active part in the drainage of Croydon, that sewage should be run *over* land and not *through* it. "That subsoil drainage would not do for sewage farms, because the sewage got into the drains and so passed into the brook or stream, before it was properly purified." Now he (Mr. Vigers) thought that was a suggestion which surveyors ought not to allow to pass as if they accepted it.

What was the fact with reference to the Croydon sewage? A perfect system of sewers having been constructed, and a vast sum of money expended in filtering and deodorizing the sewage, it was found that, though they could make the water bright, they did not succeed in making it pure; it ran into the Wandle (its natural channel), defiled the stream, and killed the fish; and the mill-owners obtained an injunction restraining the Local Board from discharging into the Wandle what they had believed to be water in a purified state. Then irrigation of land was resorted to upon the farm at Beddington. This land being nearly on a level with the Wandle, there was a very small amount of earth above the standing water in the soil, and practically the sewage did run over, and not through, it. The other farm more recently taken by the Croydon Board, at Norwood, was clay land, the sewage soaked more completely into it, and Dr. Carpenter spoke of it as a locality round which houses were being built, and which was in fact free from offensive smell. It certainly was not so at Beddington. He (Mr. Vigers) could speak from his own knowledge that, owing to the shallow depth of dry earth there, the sewage sometimes passed off in a state offensive to the nose, and was said to be a nuisance in that neighbourhood. There would be seasons when, the water in the Beddington soil being reduced by evaporation, the sewage would soak in, and then Dr. Carpenter's theory would be at fault there. He (Mr. Vigers) thought the greatest benefit to be derived was not by passing the sewage over the land, but on to land so drained, that it should pass down through it. All must agree that water would not run through drained land as through a sieve; it would run into it and be absorbed as in a sponge, and held there, to be taken up by vegetation or by evaporation. As to the sewage running into the drains and away in a foul state, those experienced in land draining know

that if they were to cut a grip in a field, making a channel, pervious as compared with the earth on each side, which had not been moved, that any water which flowed over such channel would go down into the drain at once; but no good surveyor would run that risk. Having made his drains and filled them in, he would take care that the whole surface of the field should be ploughed or stirred up to a certain depth before applying it to sewage irrigation, and then the result would be that the water would fall upon the surface, soak in, and descend in something like straight lines; and if the earth became overcharged, would further descend until it met with some resistance, such as standing water in the soil, and then would rise into the bottom of the drain. The mistake made by those who did not understand the theory of land drainage was, that they supposed the water entered from the top of the drains instead of, as it actually did, from the bottom. The proper theory of draining was to avoid the running over a surface, and to do everything to make the water run into and through the land.

It was very well to talk of this question as if they were dealing with the London sewage alone; but look at the small towns and villages in the valley of the Thames! An order had been issued by the Conservators of the Thames, that their sewage must no longer flow into the rivers. What were they to do? The question was not whether it would pay to put sewage upon the land; it *must* go upon the land in some shape or other. He thought it would be unfortunate if they prematurely closed this discussion, or shelved it by referring it to a committee. He looked upon it that they were still students of the subject to a great extent; he himself had learned a great deal from the discussion, and he thought, with all deference to those who suggested reference to a committee, that they should do all they could to keep the subject open, and they might eventually, not as a committee, but as the Institution of

Surveyors, make a report on the subject of some practical utility.

Mr. W. Sturge (Member) agreed very much with Mr. Vigers, that it was undesirable that this discussion should be closed. The subject was so large that it would furnish matter for every meeting of the current session. He believed they were only in the infancy of the subject, and he submitted that the best course to adopt was to pass, either on this or on a subsequent evening, a resolution embodying their views so far as they went at present. He thought they had all arrived at this conclusion, that the application of sewage to the land, in some form or other, was the only solution of the difficulty of relieving the rivers from pollution; but as to the particular mode by which it should be done they must defer their opinion. He was much interested in all that he saw on Mr. Hope's farm, and it led him to hope that the system was one which would be applicable in many cases. It would probably be, under favourable circumstances, the only profitable method of dealing with sewage; but there were many towns where it could only be applied by pumping, and he did not know whether it would be profitable to employ this system in such cases. There was another system of dealing with sewage, which had been scarcely alluded to, and that was the system of deodorization. He did not speak as an advocate of this system, for he had no experience of it, but he understood that it had been very successful in some large towns in relieving the rivers from pollution. So far, however as he understood, this had not been done at a profit, inasmuch as the manure was not of such value as to pay for the manufacture; but he believed this to be a secondary question, as compared with the stern necessity of getting rid of the sewage from the rivers. The third mode of dealing with it was by means of earth closets. The result of all enquiries he had made was, that they

answered well in public establishments, under complete superintendence and supervision by persons whose duty it was to supply the dried earth and see to the cleansing of the closets, but he did not believe that they would answer generally in the houses of the poor in villages and small towns. These were the only three systems at present known of dealing with this difficulty, but he thought with regard to one and all that they were in the infancy of their knowledge. Mr. Squarey advocated earth closets, and spoke of the great saving in sewers which would result from their use, and which would more than meet the expense of persons employed to supply the earth and inspect the closets. He forgot, however, that the manure had to be removed and disposed of in some mode or other. To bring the case to a practical solution, as far as they were at present able to do so, he thought some such resolution as the following might be submitted to the meeting :—

"That the application of sewage to land appears to be the only mode of relieving rivers from pollution, but that this Institution is not at present prepared to recommend any particular mode of application, but commends the subject to the continued and earnest attention of its members, and invites them to bring the results of their experience before the Institution at a future time."

Mr. E. J. Smith (Member) said, as it was pretty certain that this discussion must be adjourned; he rose to throw out a suggestion as to the information it might be desirable to obtain before they entered upon the subject again. They had this evening heard of the results of the operations at Ely, and at Thorney, and he thought it would be well if they could, in the interim, obtain similar information as to the systems existing in the several towns throughout England. There were many towns where systems, good or

bad, had been in work for a considerable period—Coventry, Salisbury, Leicester, Bedford, and other places. He wished therefore to propose that this discussion be adjourned, and that they should all, in the meantime, try to obtain from the authorities of towns, who had had experience of any system, the exact details of the result.

Mr. R. B. Grantham (Associate) would inform the Meeting what had already been done in the way of collecting the information suggested by the last speaker. At the meeting of the British Association at Norwich last year, he and some friends obtained sanction to form a committee, and a small sum of money was granted to defray the expense of inquiries. The committee thus formed, issued four hundred circulars, containing questions upon all the principal subjects relating to the treatment of sewage. To those circulars one hundred and seven answers were received, and such particulars as were obtained were presented in a tabulated form and laid before the British Association at their last meeting at Exeter. The committee was continued, and proposed to carry out the inquiries to a still further extent before the next meeting of the Association, when they hoped to be prepared with a report on the subject. They would have the assistance of Mr. Hope, who had kindly offered to make some further experiments on his farms. He did not think the Institution was at present in a position to pass a resolution on this subject. It was evident that the towns knew very little about it, and the information given in the replies received was of a very meagre character. Some towns were carrying out operations, as well as they could, under pressure of the Court of Chancery, and Ely probably had been as successful as any. In many foreign towns they had no system at all, but the sewage was collected in carts and carried away, and various prices were obtained for it.

One town made £1600 a year by the sewage, while another paid the same amount to get it conveyed away.

At the President's request, Mr. Grantham promised to supply the Institution with copies of the report made to the British Association at Exeter.

Mr. J. H. Lloyd (Associate of Council), remarked, that he should not like it to go abroad, that there existed a doubt amongst the members whether sewage could be profitably applied to the land. Facts, already ascertained, were sufficient to demonstrate that it could be, and it seemed to him to be very undesirable that any doubt should exist, or be supposed to exist, in the minds of those present, that properly applied and under proper conditions, the sewage of large towns could be used with agricultural and commercial success.

The President said, as far as he gathered from the discussion, no one had doubted that the land was the proper place for the sewage. As to the commercial value, there had been some variety of opinion, but it must depend in a great measure on the relative situation of the sewage outfall and of the land upon which it was to be applied. No one could doubt that when it was upon the land, it was a most valuable ingredient, and one that should not be wasted. With all deference to his friend Mr. Sturge, he doubted the policy of this Institution, in its corporate capacity, passing any resolution on this subject.

The adjournment of the discussion till the 24th January was then agreed to.

ON THE

ENFRANCHISEMENT OF COPYHOLDS OF INHERITANCE.

By EDWARD SMYTH, Associate.

Read at the Ordinary General Meeting of the Institution of Surveyors, *January 10th*, 1870.

JOHN CLUTTON, PRESIDENT, IN THE CHAIR.

Although so many enfranchisements have been effected in recent years towards the abolition of a tenure which has long survived the necessities it was designed to meet, copyholds still exist in such vast numbers as to cause their enfranchisement to be a subject which intimately concerns most of those who are connected with this Institution.

A Lord Chief Justice of England in the reign of Charles II.,—and who appears to have been himself a "villein," though in the modern sense of the word,—left a posthumous work on Courts Leet and Courts Baron which has been a book of reference with later writers on copyholds, and which contains the following concise explanation of a manor:—

"As to the antiquity of manors, we find that the ancient kings of this realm, who had all the lands of England in demesne (*i.e.*, in their own hands), did grant a certain compass or circuit of ground to certain lords and great personages, with liberty to parcel the lands out to other inferior tenants, reserving such duties and services as they thought fit, with power to keep courts wherein they might redress misdemeanours and nuisances within such their precincts and punish the offences of their tenants, and debate and

decide controversies of *meum* and *tuum* between them: the said lords performing such services and paying such rents, &c., as the said kings reserved by such their grants and donations. And these grantees, being formerly great lords and noblemen, were called barons, and came to Parliament, and from thence the courts so granted are called Courts Barons, as also the grantees are called lords, and the lands granted are called manors or lordships to this day; though, in process of time, by grants and conveyances from such noblemen and barons, these lordships or manors came into the hands of knights and ordinary gentlemen by purchase, &c., and thus we find them at this day."

The grants of manorial lands and the services attached to them having thus originated with the will of the respective lords, it may be easily conceived that the benefit of the grants and the nature of the services were of very different kinds from the outset, varying according to the relation in which the grantees stood to the lords; and further that these grants only gradually settled down into the specific customs now attaching to particular manors, and to particular tenements of the same manor.

The old knight-service or military tenure having been abolished, we first meet with the case of those who hold of manors as freeholders, originally if not still liable to render chief-rents and heriots, and, in the case of a new tenant, a relief usually equal to one year's chief-rent.

We then come to the class of tenants for whom it seems that the lords anciently held, not the freemen's, but the customary court or court of the copyholders; the court for those who claimed only by custom, and whose holdings were originally for the most part dependent upon the will of the lord, and subject to the performance of duties of a servile kind.

Among these, the nearest to freeholders in the extent of their rights appear to be the copyholders of frank tenure, or

privileged copyholders, generally known as customary freeholders, and as paying rents, reliefs, and heriots, but whose base services in times past are said to have been limited in their nature, and not prescribed by the will of their lord. While these form the highest class of copyholds, the lowest comprises the unusual case of lands held for terms of years, and the common case of lands granted for three or more lives, in both of which, with very rare exceptions, the fines charged for renewals have not been made with such a certainty of amount as to have constituted a custom, and have invested the tenants with a right of inheritance.

Intermediately is the vast class of copyholds of inheritance, for the origin of which in this country we are referred to a period of serfdom,—the state of transition from slavery to voluntary work through which, in one form or another, the common people and conquered races have ordinarily passed; a period when the lords instead of accumulating all the fruits that could be produced from their lands by the labour of those whom they had in subjection, saw that it would be more expedient to grant to some of them a tenure at will in the lands they cultivated, and to require a mixed tribute of money rent, of certain articles of produce, and of only a limited amount of direct personal service. It is gathered from history how the extreme power of the lords was often opposed by the influence of monks and prelates, and subsequently by the preaching of the friars; and how it was weakened by the breaking up of baronial estates ensuing at one time from the crusades, at another from the wars of York and Lancaster, and frequently as a consequence of the extravagance of their possessors. We may fairly suppose that the serfs or villeins were less prompt with personal obedience whenever the manors passed from the baron class into the hands of meaner-born persons, sometimes the descendants of thrifty villeins; but perhaps the modes, short of riot, by which

they sought to work out their own emancipation, are not so clearly known to us as to render uninteresting the following indication of what may be considered to have been the final stage of the process. I take it from one of the admirably systematic surveys of ecclesiastical property, made in 1649, by order of the Parliament; and the case is that of a lord farmer who probably considered he had reduced his demand for his tenants' work to the smallest possible amount. The survey states :—

"There have beene heretofore certaine Dayes Workes which the Coppyholders of yard lands and halfe yard lands aforesaid were wont to doe for the Lord by the plow in the Harvest time besides the Money Rents they paid as aforesaid. But it is alleadged by the Tennants that the said services have not bin of late required of them by the Lord of the said Mannor in regard the Dyett which the said Tennants claymed to have of the said Lord in the dayes they did the said service was accounted more chargeable than the said dayes worke were profittable."*

But before the question of servile work could have been thus narrowed, the grantees of what are now known as copyholds of inheritance had doubtless obtained their far surer footing than the original will of the lord; and the words "to hold at the will of the lord according to the custom of the said manor" had ceased to be operative except as regards the second clause. The long-continued practice in a multitude of manors, that the lands of a deceased tenant should be granted to some one standing to him within the degree of relationship prescribed by the customs, had come to be legally recognized as obligatory upon the lord; and it would reasonably follow that the tenant should be allowed to sell or "alienate" the heritable

* The above is not extracted from the original, but from an official manuscript copy; and the certificate of the correctness of the copy is probably not intended to guarantee the accuracy of the spelling.

interest which he possessed in the copyhold lands to a stranger who would pay for his own admission a fine usually very similar in amount to that charged to the heir. In several manors there are indeed strikingly exceptional customs on this point, and in others a fine is also due upon the death of the lord, not necessarily of the same kind as that charged on the admission of a tenant; but these cases seemed fitted rather for special than for general consideration.

Just as the freeholders of manors were upon their accession charged a relief commonly equal to the annual rent to which their holdings were subject,—just as first-fruits were similarly payable in the church,—the fine chargeable upon a copyhold tenant for his admission was perhaps in all cases originally equal to a single year's rent. In some manors we know a fixed fine is still charged equal to only one year's quit-rent, the actual annual value in time long past; in others a fixed fine is charged of so much higher an amount that it would seem as if some later valuation of the copyhold lands had been agreed upon as the basis for future fines. In others again—those which are the principal subject of this Paper—neither the ancient rent nor any later valuation has been adopted, but the fine is dependent upon the improved annual value of the land at the present time, and called fine "arbitrary," a term which indeed can only be accepted in a "non-natural sense." For the fine, if absolutely arbitrary, might be put so high as to nullify the tenant's right of renewal; and as it must therefore be proved to be customary and reasonable, the word "arbitrable," which appears to have been sometimes used, would be a happier term to employ even now. This term is found in a judgment which is quoted at great length by Mr. Serjeant Scriven in his Treatise on copyhold and other tenures, and which contains very interesting particulars as to legal decisions that had been given

respecting arbitrary fines. It was delivered about the year 1780, in the case of GRANT and ASTLE, and the Court of Common Pleas by Lord LOUGHBOROUGH decided in the negative upon the question whether the lord of a manor was bound to make any deduction for land-tax in assessing the fine. From the extracts given from this very elaborate judgment, it seems that in the reign of Elizabeth the courts of law interposed to moderate the exercise of the lord's right to a fine where the custom had left the amount of it uncertain, and determined (though after conflicting decisions) that a copyholder's refusal to pay an unreasonable fine did not work a forfeiture of the tenement. It further appears that in the sixth year of the succeeding reign, that of James the First, *two* years' value was adjudged to be an *unreasonable* fine; and that there were cases in the fifth and twelfth of King Charles the First in which Lord Keeper COVENTRY's opinion was that one year's improved value was a reasonable fine. But forty years afterwards, namely, in the twenty-ninth of Charles the Second, Lord NOTTINGHAM held (though it seems in a very peculiar case) that *two* years' value was a *reasonable* fine; and Lord LOUGHBOROUGH's judgment proceeds:—"At the time of this determination in 1677, two years' value was not a much higher payment than one year's value had been at the time of Lord COVENTRY's determination. The interest of money had been reduced, and from that and other causes the value of land had risen. One year's value might be nearly as large as an aliquot part of the selling price of land in the fifth of Charles the First as two years' value at the time of Lord NOTTINGHAM's determination. From that time to the present the idea of two years' value being a reasonable fine, in the case of a fine arbitrary, (or, in the more proper phrase, *arbitrable*,) has prevailed uniformly, and the adhering to this rule has been a matter of very great convenience though it cannot be said to be a matter of strict justice,"—on account,

he continued, of subsequent reductions in the rate of interest.

But has this non-increase of the fine been really a favour to the copyholder, and not a mere act of justice? The doubt may be scarcely pardonable, yet it seems to me that an increased demand for land and a reduction of the legal rate of interest were inadequate explanations of the increase of the fine from one to two years' improved value. The greater demand for land did not warrant this increase of the fine, for it would find expression in the increase of the annual value itself. Again, the reduction in the rate of legal interest which took place during the Commonwealth, from eight to six per cent., and which was re-enacted at the Restoration, would affect the income of the lord from fines as well as that of the copyholders; it would increase the selling price of the manorial interest as well as that of the tenant, and it therefore did not afford a justification for the two parties sharing the profits of the copyhold lands in any other proportion than before. There seems room for the conjecture that many lords had gradually insisted upon fines on a somewhat increased scale, moved by a feeling of chagrin that, according to the ultimate decisions in the reign of Elizabeth, "the will of the lord" had ceased to have any value but that of a technical expression, and thinking it only fair to make the tenants pay something extra for the right of inheritance which former lords were found to have permitted them to acquire. In the parliamentary surveys, to which reference has been made, (written it will be remembered just about this period,) there are occasional indications of such an exercise of the lord's option in requiring a larger fine than one year's value. For instance, of one manor we read,—"The fines payable for the said tenements upon descent or alienation are arbitrary, but usually between one and two years' improved value is accepted for the same;" and of other manors in the same

county it is said that the fines were two years' value on death or alienation. It is therefore not improbable that during the period over which the above-mentioned judgments extend, the practice of obtaining from one and a half to two years' value as a fine had become very general.

But although the fine arbitrary has been limited to twice the improved annual value, after deducting for repairs, quit-rent, and other outgoings except land-tax, yet the circumstance of its being the *improved* annual value was adjudged to be prejudicial to the national welfare to such extent as the tenants were thus deterred from improving their property by the consideration that part of the increased value they might confer upon it would flow into the pockets of the lord in the shape of fines. Again, the heriot of a beast, or some other personal chattel (or its money equivalent), due in most manors from the estate of a deceased copyholder who has held lands upon which there is or was an ancient messuage, afforded a further inducement to the legislature to facilitate enfranchisements. Considered by some as having originated in the gratitude of the tenants to the lord for the tenure allowed to them; by others as bequests to propitiate the lord's favour towards their children; by others, and with perhaps greater probability, as exactions by the lord, (with the object, it may be, of keeping up the stock of his demesne, the central home of the tenants,) just as war-horses or arms were the heriots of freemen who followed their lord to the wars:—viewed in any of these lights, the original purpose of heriots had long ceased to exist, and they were seen to have often occasioned to a copyholder a risk of loss out of all proportion to the intrinsic value of the copyhold tenement he might have chanced to possess, from its intermixture with a large estate.

Therefore, to facilitate enfranchisements, the Copyhold Act of 1841 was passed, the Tithe Commissioners for

England and Wales being appointed Copyhold Commissioners to direct its operation. Besides removing some restraints which had attended the renewal of copyholds, and also removing such impediments to enfranchisement as were owing to disabilities of either lord or tenant, the act increased the inducement to tenants to enfranchise, by declaring that lands dealt with under it should be freed from all encumbrances affecting the manor itself. It also empowered the lord and a certain proportion of the tenants of a manor to enter into an agreement which should be binding upon all the tenants, and by which the lord's rights throughout the manor should be commuted for annual rent-charges variable with the price of corn, and perhaps to some further extent, or for sums of money (similarly variable) to be paid as fines either on death and alienation, or at such fixed intervals as might be agreed on. Or the lord might make an agreement with any one or more tenants for a similar commutation, applicable only to his or their tenements. Or the lord might make agreements with all or any of the tenants of a manor for the enfranchisement of their tenements, in consideration of the immediate or prospective payment of sums of money.

The Commissioners seem to have entered energetically upon their work,—who that knew the late Mr. Blamire could doubt it?—and in June, 1842, they made their first report. Very few individual enfranchisements had been completed, but they stated that one entire manor had been commuted, and another was in progress of enfranchisement; and, undismayed by the peril of prophesying, they expressed their anticipation that the commutation or enfranchisement of whole manors would become popular and common. Their report ended with a suggestion that corn rent-charges, to arise from the lands dealt with, should be allowed as the consideration for enfranchisements, just as they already were in commutations. This was authorized by the Copyhold

Act of 1843, by which it was also enacted that the consideration for commutations or enfranchisements of lands held of a manor might be taken in the form of a conveyance to the lord of other lands or rights, provided they were parcel of the same manor,—a proviso which was, however, repealed by the Act of the following year. In their report of this year, 1844, the Commissioners, still hopeful of dealing with a manor as a whole, advised that, upon the concurrence of the lord and a certain majority of the tenants, a compulsory enfranchisement of all the tenements of a manor should be effected, just as there was a power to similarly agree upon an entire commutation of the lord's rights. And three years later the Commissioners, in their sixth report, considered that the time had arrived when the concurrence of lord and tenant should no longer be necessary to a commutation. They recommended that any tenant should be empowered to call on the Commission to commute his uncertain payments, and to assign to the lord a consideration; and further, that whenever two-thirds in value of the copyholds in any manor were commuted, the lord should be entitled to call on the Commission for a compulsory commutation of the remainder. With this view the then Commissioners desired that there should be given to them what, by the way, is very desirable for every one, and for surveyors above all, namely, "extensive powers of calculating prospective value;" and they also desired to be allowed to decline to interfere at all in cases which they might consider very exceptional.

In less than five years afterwards the Copyhold Act of 1852 was passed, which enacted that in the case of any tenement to which the next admittance should take place, on or after the 1st of July, 1853, the tenant should have power to compel an enfranchisement in consideration of a gross sum; or the lord (subject to proving his title, if desired, to the satisfaction of the Commissioners) might

compel the tenant to take an enfranchisement in consideration of the payment of an annual rent charge. Either of these considerations, or lands, &c., might (as before) be, by mutual agreement, the compensation for the enfranchisement; and enfranchisement rent-charges, as well as commutation fines and rent-charges, need not be variable with the price of corn, but might (as advised in the Commissioners' Report of 1850) be of fixed amounts. To prevent hardships or injustice in special cases, the Commissioners were empowered in one section to suspend proceedings for enfranchisement, and in another to govern cases in which an enfranchisement would prejudicially affect the mansion-house and grounds of the lord. Common rights were to continue to attach to lands enfranchised under the Act; and rights to mines, minerals, sporting, and royalties of other kinds, were to remain undisturbed, except by consent.

The latest Copyhold Act (1858) superseded by fresh enactments a short act that had been passed in 1853, mainly with reference to cases in which the lords for the time being had only a limited interest. It further repealed all the provisions of the former acts, by which a tenant might be bound to pay for either commutation or enfranchisement a consideration to which he had not specifically agreed,—provisions upon which the original Copyhold Commissioners had relied, notwithstanding the many and cumbersome clauses that it had been found necessary to enact for the purpose. It also extended the right of compulsory enfranchisement to cases in which the latest admission had taken place prior to 1st July, 1853, providing, however, that if such enfranchisement were promoted by the tenant, he should tender the value of a fine and heriot, and two-thirds of the steward's fees,—a proviso which may be considered as having by this time lost its pecuniary importance.

The schedules appended to the Commissioners' Reports of late years enumerate transactions of an extent which is

indicative of the thorough working order of the Commission; and the terms of the reports themselves are varied only by occasional statements of the exercise of the Commissioners' discretionary powers in suspending enfranchisements which would have worked a hardship to individuals, the grounds alleged in several cases being an excessive estimate of the value of the interest of the lord.

Upon this important subject the Commissioners have published two documents, indicating the terms for enfranchisements. The first of these, issued in the early days of the Commission, stated, *inter alia*, that the enfranchisement from fines arbitrary was usually made at from 4 to 6 years' value of the tenement (*i.e.*, about $2\frac{1}{2}$ fines), heriots being paid for similarly at the rate of $2\frac{1}{2}$ heriots on the average of the last three, and quit-rents being valued at 25 years' purchase. The Commissioners offered this statement as only a rough guide for what were at that time comparatively rare transactions; and, regarded as such, nothing need be said to its detriment. On the other hand the second document, issued in 1855, and having reference to enfranchisement from ordinary arbitrary fines, presents an appearance of the most refined exactness; 3 years' purchase of the annual value is set down as the consideration for enfranchisement by a tenant of the age of 20, 5 years' purchase for one of 70, and for each intermediate age a year's purchase is given to six decimal figures.

Against this table Mr. Rouse, in his Copyhold Enfranchisement Manual, brings a number of objections, the most noteworthy of which are, that the table does not extend to ages older than 70, and that it makes no distinction between fines arising from houses and those arising from lands. If it is indeed the case that the Copyhold Commissioners, when publishing this table, intended that no deviations from it should be permitted in respect of either the nature of the property or the extreme age of the tenant, then the table is

certainly open to such objections. But if the Commissioners merely wished to give for ordinary cases a sort of mean standard for guidance in respect of age, then on adopting Mr. Rouse's statement of the fines occurring upon an average every fourteenth year, I propose to show in parallel columns that the values of such fines are about as nearly indicated by the Commissioners' table as by those which Mr. Rouse has prepared in its place. Few valuers, however, can have failed to be struck with the oddness of its giving to within the two-millionth part of a year's purchase the actuary's graduation of materials which are necessarily very coarse on account of the singular circumstances that in these holdings the fine paid upon the creation of any tenancy is irrespective of the age of the tenant admitted, and also irrespective of the rate per cent. which the particular property is supposed to yield as an investment, and further that a very similar fine may be repeated at any moment after an alienation.

However, although we all know that such apparent exactness in this matter is merely an extravagant fiction, there is no occasion to go to the other extreme, and to ignore almost entirely the business of an actuary, and trust to the lucky chance of a balance of errors. The proportion of a fifth of the fee simple value, or a sixth of it, or something between the two, is commonly agreed upon as the consideration for an enfranchisement; but the adoption of this in preference to some other fraction, such as a third or an eighth, is based upon a calculation by some actuary in time past, and a thoughtful valuer must desire to have in his possession a table which shall enable him to make a reasonable allowance for every year's variation in the ages of the copyholders.

Mr. Scratchley, an actuary, and formerly a Fellow of Queen's College, Cambridge, has written a manual on the enfranchisement of copyhold property, but the main pur-

pose of the book seems to have been the promotion of Copyhold Enfranchisement Societies, which should have the good effect of helping tenants to enfranchise and improve their property, by making them advances of money secured through life assurance. As regards the terms for enfranchisement, I do not observe that he does more than give the established formula for finding the value of a series in perpetuity of fines of £1, payable by successive lives assumed to be all of the same age at the time of succession. The formula may be expressed in words as that of dividing one fine by the difference between unity and the present value of £1 payable on the extinction of a life now of the assumed age. The quotient is the value of the fines of £1 in perpetuity, the first being payable immediately; and this value has, therefore, to be discounted for the term of such life as may be in possession. But he points out that the formula will require modification at the hands of the valuer, on account of the fines from copyholds being also payable at other times than upon inheritance.

Mr. Rouse, in his manual before referred to, has entered upon the subject very fully; and in addition to the arithmetical portion to which alone this review will refer, his work contains a large amount of, I believe, most serviceable legal information, particularly his digest of the copyhold acts contained in the third and latest edition.

At pp. 97-9, he writes of the value of enfranchisement from fines when payable only on admissions after the deaths of successive tenants, and to such a case therefore the above-mentioned formula may be applied. Accordingly, the correct result (or nearly such) is given by Mr. Rouse for the enfranchisement to a tenant about to be admitted, and aged 44,—which is here suggested by him as the average admission age,—viz., (assuming three per cent. compound interest,) 4·2 years' purchase, of which 2 he says are for the fine now payable, the remaining 2·2 being for

the enfranchisement from future fines. He very properly goes on to intimate that if a life of an age younger than the average,—one of 30 for instance,—is about to be admitted and to enfranchise, the discount of the second and following fines will be larger; these being more remote, their value will be proportionably less than the 2·2 they were worth in the case of a life of the average admission age, 44,—which is evidently the same in effect as deducting more than the fine of two years' purchase from 4·2 or the value of the fines in perpetuity. And he adds, "Should the value be required when there is a life on the rolls, the value of that life will be estimated in like manner."

It is surprising that after this perception of the principles of the case Mr. Rouse, in passing from his explanatory remarks to his "Rules," should give for the same case a rule (No. 7, p. 115) which produces a widely different result. He here abandons the assumption of 44 being the average age of the copyholders when admitted; and for the value at three per cent. of the series of fines from the present time for ever he names 4·8 years' purchase instead of 4.2, basing the former upon an assumption which he here introduces, that in the case of lands the intervals between the admissions will ordinarily be found to average 18 years, whilst in the case of house property he suggests 16 years. These intervals are however materially shorter than the expectation of life at the age 44; and it is not shown why fines payable only after the deaths of the tenants should happen more frequently in the case of tenants holding houses than in that of tenants holding lands. However, the discrepancy in the values assigned by him in the two places to the perpetuity of the fines at three per cent. is of comparatively little moment; the more remarkable circumstance is the divergence between his remarks and his rule as to the allowance to be made from the perpetuity in respect of the age of the tenant on

the rolls. The plan laid down in his rule is to deduct from the value of the series of fines only a single fine of two years' purchase in the case of the best possible life, and to deduct in the case of any other age a proportionate part of such two years' purchase; that is to say, he makes here no greater abatement in respect of the best possible life, a child, than that which he had properly shown in his previous remarks to be needed in the case of a life of 44; and makes indeed a smaller abatement than that which was rightly called for in the case of a life of 30. *Both* of his plans cannot be right; it is the second which is erroneous. The circumstance that it is possible for a very young life to be admitted on payment of the fine is not apposite to the question, for the best possible life is an extremely exceptional and not the average holding assumed in order to capitalize the fines. For the latter we might take a life of the average age of copyholders at the time that they inherit; and it is, therefore, on an enfranchisement to a tenant of this average age (as in his previous remarks) that the deduction of the two years' purchase should be made, a specific deduction of a greater or less amount respectively being needed in the case of a younger or older aged tenant.* I have dwelt thus much upon this discrepancy because, in the ordinary case of fines on admissions after death or alienation, to be next considered, Mr. Rouse has similarly framed his rule and

* Adopting the notation of Mr. Peter Gray's classical Paper on the Theory of Successive Lives in the second volume of the Journal of the Institute of Actuaries, the value of the perpetuity of the periodical fines of £2, the first being receivable at the end of the year (of age) in which the present tenant, aged x, may die is

$$\frac{2}{1-A_y}A_x = \frac{2}{1-A_y}\left(1-\frac{1+a_x}{1+P}\right) = \frac{2}{1-A_y} - 2\frac{1+a_x}{1+a_y}$$

When the present tenant happens to be of the average age of tenants at their admission (which we may put for the uniform succession age y in the formula), $x = y$, and we have simply to deduct 2 from the $\frac{2}{1-A_y}$ which is the value of the fines in perpetuity when the first is to be paid immediately.

tables with a regard to the best possible life, and its inapplicability is rather more readily seen in the case of fines only payable after the deaths of the successive tenants; but I am not acquainted with any manor in which this is the custom.

With reference to the ordinary case of copyholds subject to fine arbitrary on admission after death or alienation, Mr. Rouse points out (p. 85), that the way to calculate the value of the fines "is to find on each manor the average interval which has elapsed between changes of tenants, for such a period of time as will give a fair average; and to then calculate on such average, allowing for the difference in values depending on the ages of the tenants standing admitted. The adopting one fixed average interval," he continues, "would be unjust in many instances towards the lord, and in many towards the tenant; though, for practical purposes, the result of considerable investigation into the matter shows that in most manors the average interval of fifteen years as to land and thirteen years as to house property, will be a just average to be calculated on as between lord and copyholder." He then capitalizes the fines from lands at three per cent. compound interest, and those from houses at four per cent., a distinction which seems reasonable.

It may be worth pointing out, however, that some injustice is done to the lord by valuing the manor fines upon the assumption of their occurring at regular intervals, instead of at the fluctuating intervals at which they are really received; for it denies to him some of the compound interest which he can make upon his earlier receipts. But I welcome this circumstance as a very desirable set-off for the injustice which is done on the other hand to the tenants by capitalizing the fines as of two years' purchase each, whereas it is now very general to take a rather smaller fine in cases of alienation,—although this, by the way, is exactly

the reverse of a common practice two centuries ago, as recorded by some writers.

On the question of the allowance to be made for an existing tenancy I differ from Mr. Rouse, as before intimated. He says (p. 87) "The difference between the value of an enfranchisement where no life is on the rolls and that where a life of the greatest value stands admitted, and in which the full manorial interval is calculated as that at the end of which the first fine will be payable, will be one fine, or in the case of fines arbitrary, two years' value. It will therefore follow that, if the best life be equal to a reduction of the two years' value, as the value of the life diminishes, the portion of the two years' value to be deducted will diminish." This assumption of the best life being equal to a deduction of two years' value, or one fine, is, I submit, inadmissible. We have seen it to be irrelevant and productive of considerable error in the assumed case of fines payable only after death; and it is impossible to conclude that the incidental introduction of occasional alienation fines can give to the best possible life any theoretical connexion with the present question. And observe the effect. At page 128 the perpetuity of the fines of £2 every 15 years is stated to be worth, in the case of a vacant tenancy (speaking roughly), $5\frac{1}{2}$ years' purchase at 3 per cent. interest, and we are there directed to charge $3\frac{1}{2}$ for enfranchisement if the tenant on the rolls is the best possible life, a female child under 6. But that value of the perpetuity is arrived at (Table VIII.) by taking the fine of 2 years' purchase payable now, and taking $3\frac{1}{2}$ as being the total present value of the fines payable in 15, 30, 45, &c., years. So that in charging this same $3\frac{1}{2}$ years' purchase for the enfranchisement in the most exceptional case of this young child, we shall be calculating as if, notwithstanding her extreme youth, the next fine would yet occur at the end of the *average* interval of 15 years—an assumption which I think indefensible. It

does not do justice to the young tenant; she may not alienate at all, but may hold on till death, and, therefore, her most unusually good life indicates a probability of the lord's next fine being distanced beyond the average interval. I submit, as before, that the deduction of one fine is appropriate only to a tenancy which is likely to last for the average period, and this average holding is not to be found in an extreme case—in the scarcely possible tenancy of a child under 6.

For want of a record of the relative frequency of the occurrence of surrenders at successive ages, I propose a tenancy at the average admission age,—say 35,—as a practical standard, and make for younger or older ages respectively a reduction larger or smaller than a single fine in proportion simply to the values of life annuities at such ages as compared with that of a life annuity at the age 35.

Appended to this Paper will be found two tables, called respectively "Annuity Table" and "Enfranchisement Table." The first shows the values in years' purchase at three and four per cent. respectively of annuities upon single lives, both male and female. These are abbreviated from the latest published annuity tables which have been deduced by the present Registrar-General (Dr. Farr), from observations upon the population of England and Wales, known as the English Life Table No. 3. Any person who may use the two tables annexed to this Paper will have simply to notice the years' purchase at three per cent. for lands, or four per cent. for houses, appearing opposite to the age of the male or female tenant, as the case may be, in the Annuity Table. And he will then turn to the second or Enfranchisement Table, in which, and opposite to such year's purchase, he will see the value for enfranchisement at three per cent. for lands, and four per cent. for houses; computed for each of a number of different fine-intervals, so that he may be guided by one or other of these according

to his opinion, whether as regards the particular property or district with which he is dealing there is a likelihood of alienation fines being more or less frequent. This table gives enfranchisement values corresponding to only each integral number of years' purchase; and it is enough to take such one of these as is the nearest to the years' purchase found in the Annuity Table, because in almost all cases the years' purchase for the enfranchisement is only desired to one decimal place; but if this should be desired to two decimal places, the necessary interpolation of the Enfranchisement Table to correspond with the exact years' purchase taken from the Annuity Table may be effected at sight. And I have given the values in the Enfranchisement Table to only two places of decimals, conceiving from all that has preceded that it is worse than useless to affect any higher degree of accuracy in tables for these enfranchisements.

The values thus offered in the Enfranchisement Table are calculated in accordance with the conclusion already arrived at, that for enfranchisement to a tenant of the age of 35, a sum should be required less by 2 years' value than if the tenement were vacant. A male life of 35 has been selected for this purpose, and there is therefore a slight inconsistency in the table to the extent of its charging a trifle too little in the comparatively rare case of a female life being on the rolls; but the maximum discrepancy (which is at the lowest part of the table) is only about one-twentieth of a year's purchase.

The following selections from the enfranchisement tables hitherto discussed, and in all of which the annual value of the copyhold property is assumed to be £1, will serve for a comparison between them, particularly as regards the effect of Mr. Rouse's selection of the best possible life, and my own selection of the age 35 as the standard for the graduation of our respective tables, to which variation the difference between them is mainly attributable.

Age of the Tenant on the Court Rolls	COPYHOLD COMMISSIONERS' TABLE.	MR. ROUSE'S TABLE. MALE TENANTS.		PRESENT TABLE. MALE TENANTS.	
		LANDS. 3 per cent. 15 years' fine-interval.	HOUSES. 4 per cent. 13 years' fine-interval.	LANDS. 3 per cent. 15 years' fine-interval.	HOUSES. 4 per cent. 13 years' fine-interval.
	£	£	£	£	£
10		3.739,978	3.1293	3.02	2.55
20	3.000,000	3.909,854	3.2780	3.24	2.73
35	3.281,621	4.098,824	3.4326	3.58	3.01
50	3.905,266	4.450,097	3.7645	4.05	3.42
70	5.000,000	4.995,855	4.3301	4.78	4.13
90		5.472,889	4.8740	5.25	4.63
Vacant Tenancy		5.585,000	5.0075	5.58	5.01

For this comparison I have adopted the fine-intervals of 15 years as to land, and 13 years as to house property, upon which Mr. ROUSE bases his principal tables in consonance with his statement before quoted, that considerable investigation has shown these to be fair average intervals. Without supposing that any particular value can attach to isolated observations, I have yet thought it fitting to ascertain the frequency of fines in some of the manors which have come to my notice in consequence of my engagement in the service of your President's firm. And here I should wish to be allowed to acknowledge that, for whatever general conversance I may have with the essential features of the present subject, I am indebted to the teaching of his practice far more largely than to any other source.

I have taken an account of the fines received in a group of manors, all in one neighbourhood, and in all of which a fine arbitrary is paid on admission after death or alienation. The observations extend over only 16 years past, which is a very much shorter period than the 50 or 70 years recom-

mended by Mr. Rouse; but, by taking several manors collectively, it is probably long enough, especially as the evidence of recent years (influenced commonly by the extension of railways) may be the most reliable as an indication of the probable frequency of future alienations. Allowing for the comparatively few enfranchisements which have taken place, I find that the average fine-interval in the manors just referred to is 16 years. The fines after alienations were rather more than half as numerous as the others, and one-fifth of the former fines followed immediately upon fines payable after deaths. The locality is the immediate neighbourhood of Hereford, and the tenements consist of lands rather than of houses. In an abstract to which I have had access of the court rolls of another manor, in an agricultural parish in Sussex, and comprising lands subject to arbitrary fines, and cottages subject to fines certain, an observation of 46 years shows an average fine-interval of 18 years. Once more: I have taken together two manors extending into two parishes in the south of England, which contain in all about 4,500 inhabitants, and which comprise a market town and the agricultural lands around it; about half the tenements consists of houses, and the other half lands. Here the fines are all certain, and those received, according to the steward's information, during 20 years, show that the average interval is 21 years; but as it is a very backward place—the population having decreased materially during the period of observation—alienations are likely to have been less frequent than in most localities. It is important to notice how potent an element of the subject is the more or less frequent occurrence of alienation fines, for if there were none such, but if each tenant held on till death, then the average fine-interval would be (approximately) the expectation of life for a person of the average age of tenants at their admission; and supposing that this is 35, the expectation is as much as 29 or 30 years. The above averages all

indicate an interval longer than the 14 years which is the mean of the two selected by Mr. Rouse; and I am inclined to think that 17 years for lands, or 15 for houses, may b a fair average. Among the profitable materials which could be collected by the Council of this Institution from the contributions of members, would be observations similar to the above respecting the frequency of the occurrence of fines in manors variously situated; and every such contribution would have a personal use for the member preparing it.

I may add that, in the two manors last mentioned, the widow of a tenant is entitled to hold for her widowhood the whole of the tenement of which her husband died seized; but it seems impossible to account for the circumstance of the fine-interval being as long as 21 years by the assumption that either the frequency of alienations or the (ultimate) inheritance of children is altered by this custom of widowhood. Even if every dying copyholder left a widow, the general effect would be merely to defer the receipt of successive fines of such a series as we have been hitherto considering, and not to reduce the number of the fines receivable during a given period of years. The fine would still be received from the child who inherits, but the receipt of it would be deferred, (viz., till the death of both his parents, instead of the death of his father only). Now, against the chance of a widower tenant remarrying and so increasing the probability of widowhood, may be set the chance of a widow remarrying, and so forfeiting her copyhold estate; and remembering that some tenants do not marry, and that widowhoods are sometimes barred by will, and are reduced in number by alienations, I think after careful consideration that in the case of any male tenant holding with this widowhood custom, it will be enough to seek in the Annuity Table for an age 5 years younger than his (but not less than the age 6).

But we have hitherto dwelt only upon the dry value of

the lord's receipts from fines, and have not considered what further allowance he may be entitled to for releasing the copyholder. It may here be noticed that Mr. Rouse suggests (p. 110) an addition of about 10 per cent. whenever "capabilities for improvement" are deemed sufficiently important to warrant an addition in respect of them. There are, however, matters to be considered beyond such improvement of the property as the valuer may anticipate, and which he will remember to take into account as a part of his valuation of the property itself. The peril of forfeiture and escheat, it may indeed be urged, has been reduced in various ways to a minimum, and fines by way of penalties are generally of small account; yet the copyholder is subject to the possibility of any penal custom being pressed by the lord, and three pages of Mr. Scratchley's book contain an epitome of quite a modern case, in which less than 4 acres of land gave rise to a fearfully long series of actions and suits, including proceedings at law against the Lord Chancellor himself, who had given judgment in favour of a Company in which his lordship held shares. There is also the dormant value that must exist in the case of any property in which two persons have interests that are not harmonious. Here the surveyor may almost tell the mathematician that the parts do not make up the whole. It is no doubt the consideration of these circumstances that leads to the copyholder at fine certain, being always charged more for enfranchisement than the dry value of the lord's receipts. Such receipts arising from fines would, in strictness, be calculated by applying the 3 per cent. Enfranchisement Table to half the amount of the fine. But, besides this, the copyholder, according to the Commissioners' later reports, is ordinarily charged about half a year's value of the property; and I propose that a like specific addition (irrespective of the age of the tenant) should, from the same

consideration, be made in the enfranchisement of copyholds held at fine arbitrary, but that here the addition should, in the case of land, be an entire year's purchase, because the periodical valuations for the arbitrary fines keep the tenements with their timber and minerals under the watch of the lord, and because his fines are increased by any outlay in the draining or other amelioration of the land and the improvement of the buildings upon it. For house property an addition of half a year's value is probably sufficient. The effect of these respective additions to the extracts at page 87 from the tables annexed to this Paper will be readily seen; but if instead of the fine-intervals there adopted, viz., 15 years for land and 13 for houses, we refer respectively to the intervals of 17 years and 15 years which I have conjectured to be the average periods, the enfranchisement values for these intervals, as afforded by the annexed tables in the case of male lives, will, when augmented in the manner just mentioned, become as in the following table. The question of what may be the average fine-interval is, however, very insignificant as compared with the question of what is the interval appropriate to any given case.

Age.	10	20	35	50	70	90	Vacant Tenancy
Lands.	3.50	3.72	4.06	4.53	5.25	5.73	6.06
Houses.	2.54	2.72	3.00	3.41	4.12	4.62	5.00

As regards Building Land, however, the addition that is requisite is of a special kind; and each case seems to require separate consideration upon its own merits. Probably on an enfranchisement of uncovered building land no one would award less to the lord than somewhere about the same proportion of its fee simple value that he would award in the case of other property; for, notwithstanding the arbitrary fine, copyholders have been continually found to

build, and in the event of any such building, the lord's future fines are calculated upon an improved annual value, which includes not simply what would be the ground rent, but also the further annual value of the buildings themselves. But in the case of a large tract of building land, fitted for the erection of a number of houses, it seems to me that in strictness the lord is commonly entitled to a materially larger proportion, notwithstanding that tenants may generally obtain enfranchisements upon easier terms. Regard may be had to the greatest number of years certain for which the custom of the particular manor will enable a copyholder to demise his lands without licence and with licence respectively, and also to the amount of the fine he must pay for any such licence; and of any building value that may be thus available to the copyholder he should be charged for enfranchisement only such a proportion as is indicated by (probably) the 4 per cent. Enfranchisement Table. But the difference between such value, and the fee simple value of the property if entirely unfettered (as would be the case after the enfranchisement), is a surplus value that is dormant during the existence of the copyhold tenure, and, in the words of the 16th section of the Copyhold Act of 1852, is "an advantage to arise from the enfranchisement;" the lord should, therefore, receive a further payment of one-half of this difference, for it must belong equally to the two parties whose concurrence is necessary to make the surplus available. And this equal division of such surplus building value applies to copyholds at fine certain just as much as to those at fine arbitrary. This, I submit, is the strict justice of the case, although many lords may be willing as an act of grace to accept a smaller compensation for the obstructive power they possess.

Again, with respect to *Timber* and *Minerals*, which neither lord nor tenant can touch without the consent of the other, the same equal partition of their value is required,

unless by the well-established custom of a particular manor the value is shared in any other proportion.

To be theoretically accurate, *Quit-rents* should, I think, be uniformly valued for enfranchisement at 30 years' purchase, after deducting such an annual sum as the collection of the particular quit-rent may be estimated to cost.

Heriots, when taken not only upon the death of a tenant, but also upon a surrender followed by the admission of a purchaser of the copyhold, could be valued for enfranchisement by multiplying the years' purchase in the Enfranchisement Table by half the value of the heriot, if it is a fixed sum of money. But when the lord has the power of taking the beast or goods of the tenant, the value for enfranchisement must depend in a great measure upon the probable nature of the next heriot, and this will be estimated according to the social position of the present tenant. From an observation in Mr. Rouse's manual (p. 107) it appears that the Copyhold Commissioners have stated that for the enfranchisement of heriots "payable on alienation as well as death," twice as much should be paid as when the heriots are receivable upon death only. Hence it would seem to be their opinion that deaths occur with only the same frequency as alienations. If this opinion is not sufficiently correct, it errs in over-estimating the general frequency of alienations, and, therefore, relatively under-estimating the sum that should be paid for the enfranchisement of heriots receivable only on the death of the tenant.

The object of such societies as the present may, I suppose, be summed up as that of progressing in one way and another from surmise towards certainty; and the present Paper has been prepared in the hope that it may be a step, however feeble, in that direction, as well as a discharge of the obligation which is laid by this Institution not only upon its members but upon its associates also.

Annuity Table; *Part* 1,—3 *per cent.* (*for Lands.*)

Age.	Male.	Female.	Age.	Male.	Female.	Age.	Male.	Female.
Yrs.	Yrs'. pur.	Yrs'. pur.	Yrs.	Yrs'. pur.	Yrs'. pur.	Yrs.	Yrs'. pur.	Yrs'. pur.
0	19.2	19.9	34	19.1	19.5	68	8.3	8.7
1	22.4	22.4	35	18.8	19.3	69	7.9	8.3
2	23.5	23.5	36	18.6	19.0	70	7.6	8.0
3	24.0	24.1	37	18.3	18.8	71	7.3	7.7
4	24.3	24.3	38	18.0	18.5	72	7.0	7.4
5	24.4	24.5	39	17.8	18.3	73	6.7	7.1
6	24.5	24.5	40	17.5	18.0	74	6.4	6.8
7	24.4	24.5	41	17.2	17.8	75	6.1	6.5
8	24.4	24.4	42	16.9	17.5	76	5.9	6.2
9	24.3	24.3	43	16.6	17.2	77	5.6	5.9
10	24.1	24.1	44	16.3	16.9	78	5.4	5.7
11	23.9	24.0	45	16.0	16.7	79	5.1	5.4
12	23.7	23.8	46	15.7	16.4	80	4.9	5.2
13	23.5	23.6	47	15.4	16.1	81	4.7	5.0
14	23.3	23.4	48	15.1	15.7	82	4.5	4.7
15	23.1	23.2	49	14.8	15.4	83	4.3	4.5
16	22.9	23.0	50	14.4	15.1	84	4.1	4.3
17	22.7	22.8	51	14.1	14.8	85	3.9	4.1
18	22.5	22.6	52	13.8	14.4	86	3.8	4.0
19	22.3	22.4	53	13.4	14.1	87	3.6	3.8
20	22.1	22.2	54	13.1	13.7	88	3.5	3.6
21	21.9	22.0	55	12.8	13.3	89	3.3	3.5
22	21.7	21.9	56	12.4	13.0	90	3.2	3.3
23	21.5	21.7	57	12.1	12.6	91	3.1	3.2
24	21.3	21.5	58	11.7	12.3	92	2.9	3.1
25	21.1	21.3	59	11.4	11.9	93	2.8	2.9
26	20.9	21.1	60	11.0	11.5	94	2.7	2.8
27	20.7	20.9	61	10.7	11.2	95	2.6	2.7
28	20.5	20.7	62	10.3	10.8	96	2.5	2.6
29	20.2	20.5	63	10.0	10.4	97	2.4	2.5
30	20.0	20.3	64	9.6	10.1	98	2.3	2.4
31	19.8	20.1	65	9.3	9.7	99	2.2	2.3
32	19.5	19.9	66	8.9	9.4	100	2.2	2.2
33	19.3	19.7	67	8.6	9.0			

The first payment of the Annuity is supposed to be made

Annuity Table; *Part* 2,—4 *per cent.* (*for Houses.*)

Age.	Male.	Female.	Age.	Male.	Female.	Age.	Male.	Female.
Yrs.	Yrs'. pur.	Yrs'. pur.	Yrs.	Yrs'. pur.	Yrs'. pur.	Yrs.	Yrs'. pur.	Yrs' pur.
0	16.0	16.6	34	16.8	17.1	68	7.8	8.2
1	18.6	18.7	35	16.6	16.9	69	7.5	7.9
2	19.6	19.6	36	16.4	16.7	70	7.2	7.6
3	20.1	20.1	37	16.2	16.6	71	7.0	7.3
4	20.3	20.3	38	16.0	16.4	72	6.7	7.0
5	20.5	20.5	39	15.8	16.2	73	6.4	6.8
6	20.5	20.5	40	15.6	16.0	74	6.2	6.5
7	20.5	20.5	41	15.3	15.8	75	5.9	6.2
8	20.5	20.5	42	15.1	15.6	76	5.7	6.0
9	20.4	20.4	43	14.9	15.4	77	5.4	5.7
10	20.3	20.3	44	14.6	15.2	78	5.2	5.5
11	20.2	20.2	45	14.4	14.9	79	5.0	5.2
12	20.1	20.1	46	14.2	14.7	80	4.8	5.0
13	19.9	20.0	47	13.9	14.5	81	4.6	4.8
14	19.8	19.8	48	13.7	14.2	82	4.4	4.6
15	19.6	19.7	49	13.4	14.0	83	4.2	4.4
16	19.5	19.5	50	13.1	13.7	84	4.0	4.2
17	19.3	19.4	51	12.9	13.4	85	3.8	4.0
18	19.2	19.2	52	12.6	13.1	86	3.7	3.9
19	19.0	19.1	53	12.3	12.8	87	3.5	3.7
20	18.9	19.0	54	12.0	12.5	88	3.4	3.5
21	18.8	18.9	55	11.7	12.2	89	3.3	3.4
22	18.6	18.7	56	11.5	11.9	90	3.1	3.3
23	18.5	18.6	57	11.2	11.6	91	3.0	3.1
24	18.4	18.5	58	10.9	11.3	92	2.9	3.0
25	18.2	18.4	59	10.6	11.0	93	2.8	2.9
26	18.1	18.2	60	10.3	10.7	94	2.7	2.8
27	17.9	18.1	61	10.0	10.4	95	2.6	2.7
28	17.8	18.0	62	9.6	10.1	96	2.5	2.6
29	17.6	17.8	63	9.3	9.8	97	2.4	2.5
30	17.5	17.7	64	9.0	9.5	98	2.3	2.4
31	17.3	17.5	65	8.7	9.1	99	2.2	2.3
32	17.1	17.4	66	8.4	8.8	100	2.1	2.2
33	16.9	17.2	67	8.1	8.5			

at the specified age instead of (as usual) one year later.

Enfranchisement Table; *Part* 1—3 *per cent.* (*for Lands.*)

Years' purchase value of an Annuity on the Life.	Number of years intervening between fines, according to whether the occurrence of alienations is								
	Frequent,			Ordinary,			or Rare.		
	13	14	15	16	17	18	19	20	21
	Years' Purchase for the Enfranchisement.								
0, or vacant tenancy.	6.27	5.90	5.58	5.31	5.06	4.85	4.65	4.48	4.32
1	6.16	5.80	5.48	5.20	4.96	4.74	4.55	4.37	4.22
2	6.06	5.69	5.37	5.09	4.85	4.63	4.44	4.27	4.11
3	5.95	5.58	5.27	4.99	4.74	4.53	4.34	4.16	4.01
4	5.84	5.48	5.16	4.88	4.64	4.42	4.23	4.06	3.90
5	5.74	5.37	5.05	4.78	4.53	4.32	4.12	3.95	3.79
6	5.63	5.26	4.95	4.67	4.43	4.21	4.02	3.84	3.69
7	5.52	5.16	4.84	4.56	4.32	4.10	3.91	3.74	3.58
8	5.42	5.05	4.73	4.46	4.21	4.00	3.80	3.63	3.47
9	5.31	4.95	4.63	4.35	4.11	3.89	3.70	3.52	3.37
10	5.21	4.84	4.52	4.24	4.00	3.78	3.59	3.42	3.26
11	5.10	4.73	4.42	4.14	3.89	3.68	3.48	3.31	3.16
12	4.99	4.63	4.31	4.03	3.79	3.57	3.38	3.21	3.05
13	4.89	4.52	4.20	3.93	3.68	3.47	3.27	3.10	2.94
14	4.78	4.41	4.10	3.82	3.58	3.36	3.17	2.99	2.84
15	4.67	4.31	3.99	3.71	3.47	3.25	3.06	2.89	2.73
16	4.57	4.20	3.88	3.61	3.36	3.15	2.95	2.78	2.62
17	4.46	4.09	3.78	3.50	3.26	3.04	2.85	2.67	2.52
18	4.36	3.99	3.67	3.39	3.15	2.93	2.74	2.57	2.41
19	4.25	3.88	3.56	3.29	3.04	2.83	2.63	2.46	2.31
20	4.14	3.78	3.46	3.18	2.94	2.72	2.53	2.35	2.20
21	4.04	3.67	3.35	3.08	2.83	2.61	2.42	2.25	2.09
22	3.93	3.56	3.25	2.97	2.72	2.51	2.32	2.14	1.99
23	3.82	3.46	3.14	2.86	2.62	2.40	2.21	2.04	1.88
24	3.72	3.35	3.03	2.76	2.51	2.30	2.10	1.93	1.77
25	3.61	3.24	2.93	2.65	2.41	2.19	2.00	1.82	1.67

Example.—Lands—Suppose fine-interval is estimated at 15 years, and tenant is a male aged 10.

Annuity = 24.1 $y\,p$; Enfranchisement = 3.02 $y\,p$ (see pages 85 to 87).

Note.—If there is a Widowhood custom in the Manor, see page 89.

In the case of Building Land, see pages 91, 92.

Enfranchisement Table; *Part 2—4 per cent. (for Houses.)*

Years' purchase value of an Annuity on the Life.	Number of years intervening between fines, according to whether the occurrence of alienations is								
	Frequent,			Ordinary,			or Rare.		
	11	12	13	14	15	16	17	18	19
	Years' Purchase for the Enfranchisement.								
0, or vacant tenancy.	5.71	5.33	5.01	4.73	4.50	4.29	4.11	3.95	3.81
1	5.59	5.21	4.89	4.61	4.38	4.17	3.99	3.83	3.69
2	5.47	5.09	4.77	4.49	4.26	4.05	3.87	3.71	3.57
3	5.35	4.97	4.65	4.37	4.13	3.93	3.75	3.59	3.44
4	5.22	4.84	4.52	4.25	4.01	3.81	3.63	3.47	3.32
5	5.10	4.72	4.40	4.13	3.89	3.69	3.51	3.35	3.20
6	4.98	4.60	4.28	4.01	3.77	3.57	3.39	3.23	3.08
7	4.86	4.48	4.16	3.89	3.65	3.45	3.27	3.10	2.96
8	4.74	4.36	4.04	3.77	3.53	3.33	3.14	2.98	2.84
9	4.62	4.24	3.92	3.65	3.41	3.20	3.02	2.86	2.72
10	4.50	4.12	3.80	3.53	3.29	3.08	2.90	2.74	2.60
11	4.38	4.00	3.68	3.41	3.17	2.96	2.78	2.62	2.48
12	4.26	3.88	3.56	3.29	3.05	2.84	2.66	2.50	2.36
13	4.14	3.76	3.44	3.16	2.93	2.72	2.54	2.38	2.24
14	4.02	3.64	3.32	3.04	2.81	2.60	2.42	2.26	2.12
15	3.90	3.52	3.20	2.92	2.69	2.48	2.30	2.14	2.00
16	3.78	3.40	3.08	2.80	2.57	2.36	2.18	2.02	1.88
17	3.66	3.28	2.96	2.68	2.45	2.24	2.06	1.90	1.76
18	3.53	3.16	2.83	2.56	2.32	2.12	1.94	1.78	1.63
19	3.41	3.03	2.71	2.44	2.20	2.00	1.82	1.66	1.51
20	3.29	2.91	2.59	2.32	2.08	1.88	1.70	1.54	1.39
21	3.17	2.79	2.47	2.20	1.96	1.76	1.58	1.42	1.27

In cases other than Building Land, add for the change of tenure one year's purchase of Land, or half a year's purchase of House Property (pages 89 to 91).

As to Timber and Minerals, see page 92. For Quit-rents and Heriots, see page 93.

Mr. F. J. Clark (Member), congratulated Mr. Smyth upon the very able Paper he had read; and he did so the more that, like a practical man, he had (after giving a short historical introduction) at once gone into the practical bearings of an important subject, which was most interesting to the Members of this Institution and to the profession to which they belonged; and one with which they would have constantly to deal, until the whole copyhold tenure of this country was extinguished.

As a matter of history, and as completing that part of the preface, he would mention that in looking through an old work on copyholds, he met with the statement—That when William of Normandy took possession of this island, he gave to his favourite, Lord Moreton, Earl of Cornwall, no fewer than 793 manors; also that at the time of the invasion of Ireland, by Cromwell, when he confiscated all the property of the Royalists there, he divided, in the nature of copyhold tenures amongst his followers, no less than five millions of acres of land in that country.

The Paper required so much thought and consideration, that he thought another evening might be usefully devoted to the subject; but, just by way of opening the discussion, he would mention that, soon after the Copyhold Act of 1853 passed, a discussion arose, in which he was largely interested, upon the subject of the tables issued by the Copyhold Commissioners. The subject was warmly taken up by Mr. George Pownall. He would, with their permission, read a short extract from the observations which Mr. Pownall addressed to the Commissioners, as the result of the interviews and discussions between that gentleman and himself. It was dated in August 1856.

"I deem it my duty to state that in making this award, I have not felt myself justified in adopting the table published by the Commissioners 'for regulating the number of years' purchase for the Enfranchisement of ordinary Copyholds,' bearing date the

7th of February, 1855; and my respect for the Commissioners, as well as for the parties who have with so much care and ability stated their views in favor of and against the adoption of this table, induces me to recapitulate, briefly, the reasons on which I have founded the conclusion that my judgment ought to be formed independently of the table in question, and on grounds having reference to the circumstances of the particular case before me. I must add, that the more consideration I have given to the subject, the more difficult does it appear to me to be to frame any table capable of universal application in estimating the value of rights, so varying and different in their circumstances, as those presented in property held by copyhold tenure.

"Recurring to my grounds of objection to the table, I consider:—

"FIRST.—That the difference in the chance of a fine becoming payable to the lord, on two estates, where the copyholders are respectively aged 20 and 70, is very materially modified by the fact that such fine is not contingent on the duration of life alone, but on every change of ownership, and that alienation is likely to be just as frequent in the cases of young as of old lives. But

"SECONDLY.—Assuming that due consideration had been given to this important fact in framing the Commissioners' table, there seems to me this radical defect in it, viz.:

"That all the calculations are based on one rate of interest, and have reference to age alone as justifying any difference in the amount to be paid for enfranchisement. Thus, in point of fact, whether the property to be enfranchised would be valued on the 3 per cent. table, as in the case of ground rents producing 33 years' purchase, or on the 5 or 6 per cent. table, as in the case of houses producing respectively 20 and 16¾ years' purchase, no difference is made to the lord; or, stating the case as it may injuriously affect the tenant, the table would give to the lord, according to his tenant's age, precisely the same number of years' purchase for the surrender of his rights in a house, which when enfranchised would produce to the tenant enfranchising only 16¾ years' purchase, as it would of land, which, under the same circumstances, he could sell for 33 years' purchase.

"It seems to me, that in fairness, alike to the lord and the tenant, they should be considered in the light of JOINT OWNERS, *having unequal proportions of, and possessing different rights in, the same property, and that to do justice to both, the proper rule to apply to the sale of manorial rights is that which would be adopted in the purchase, by a part owner, of other interests in the same property*, so far as the cases are analogous; and, *undoubtedly, this rule would be based not only on the annual or other periodical income which the property would produce, but the rate of interest at which such property would sell*

would also be an essential element in the calculation; and this element seems to me to be wholly wanting in the Commissioners' table.

"There is a *third* and serious objection, in my mind, to the difference which this table makes between the amounts to be paid by a young and old life, *applying particularly to the cases of property ripe for building purposes.*

"Practically, a copyholder cannot, with advantage, convert agricultural into building land to any extent; and there is, therefore, in property otherwise eligible for that purpose, what may be considered a dormant value, so long as it remains unenfranchised, —*which is just as distant to the young as to the more aged copyholder.* Now, the effect of enfranchisement of property, under these circumstances, is to enable the copyholder at once to realize this increased value; and I am at a loss to know upon what ground it can be contended, in fairness, that the lord is not, in such a case, to participate in this advantage, and to have his interest calculated upon the same principle that the tenant's would be, if he were about selling the estate."

In some cases, no doubt, compulsory enfranchisement operated with extreme hardship, and as an instance he would mention one case in which the tenant (a widow) had let property on lease at £330 a year, which formed her sole income; notice of compulsory enfranchisement was given by the lord, and the effect of that was to charge the estate with £200 a year, and thus reduce her annual income to £130. He would conclude by asking all to join most heartily in thanking Mr. Smyth for the great care and ability which he had displayed in the Paper just read by him.

Mr. E. Ryde (Member) had great pleasure in seconding the vote of thanks to Mr. Smyth. He fully concurred in all Mr. Clark had said with regard to the excellence of the Paper, and he congratulated the Institution, that this subject had been brought before it, and in so practical a manner. He considered that the introduction of five or six places of decimals into the Copyhold Commissioners' table was simply ridiculous, for they were dealing with interests of which no man living could absolutely define the value.

He thought, therefore, that it would be quite sufficient to use one or two places of decimals at the most. He was one of those who thought copyhold tenures should be abolished as entirely unsuited to the present age. In cases of individual hardship attending compulsory enfranchisement, it must be remembered that the hardship did not always arise in the transaction itself; for example, in the very instance mentioned by Mr. Clark, the advisers of this lady, by allowing her to build on such a tenure, inflicted the hardship. Notwithstanding the few cases of individual hardship that would arise no doubt, he thought it would be a great boon to the landed interest, and as advantageous to them as the commutation of tithes, if a copyhold enfranchisement measure were passed by Parliament, compelling the tenant to enfranchise his property, either by payment of a capital sum, or a rent-charge on the estate. He (Mr. Ryde) knew several manors where, in case the husband died, the widow was entitled as long as she remained a widow; but if the widow sold the copyhold, the question arose, whether the two years' or one and a-half year's fine was applicable? whether the fine was one payable on death or on alienation? The author of the Paper had remarked, that valuers might differ from mathematicians in saying that two parts did not make up the value of the whole. That was quite certain. The value of the lord's interest and the copyholder's together was not equal to the value of the whole as a freehold. He thought that was too much lost sight of. The author, in another place, argued that the lord should have one extra year's purchase, because he was enabling the copyholder to deal with the land. He did not agree with that; he thought the lord was entitled to the value of his own interest only, and it ought to be made obligatory upon the tenant to give that. He knew of a case where the copyholder was ninety years of age, and there had been nothing in the shape of fine for the last fifty

or sixty years on a large estate. When that manor was sold, the man who bought it calculated upon receiving something from the property within a reasonable time. He did not think that fact entitled the lord to more than the fair interest in the property at the time. Before sitting down he would express a hope, that either Mr. Smyth or the President would oblige the Institution with some particulars relative to a very singular manor, known as that of Old Paris Garden, in Surrey, near to Blackfriars Bridge. The whole circumstances of that peculiar manor, in which the copyholders were themselves the lords, had been before the President very recently.

The President said he could give the particulars for which his friend had asked, but inasmuch as he believed there was no other similar manor in England, he did not think the information respecting it would be practically useful, as such a case could never again arise. The only difficulty was in the apportionment of the money paid for the enfranchisement, which belongs to the copyholders themselves, as the lords of the manor in question.

The vote of thanks to Mr. Smyth was cordially agreed to, and the further discussion of the Paper was adjourned till the 7th of February next.

ORDINARY GENERAL MEETING,

Monday, January 24th, 1870.

JOHN CLUTTON, PRESIDENT, IN THE CHAIR.

ON THE DISTRIBUTION AND AGRICULTURAL USE OF TOWN SEWAGE, BY W. HOPE, V.C., ASSOCIATE.

The discussion on this Paper was resumed by

Mr. R. B. GRANTHAM (Associate), who reminded the Meeting that there were already three Royal Commissions appointed to collect information and report on this subject, viz. :—

I. The Sewage Commission, dated 5th January, 1857, "to inquire into the best mode of distributing the sewage of towns, and applying it to beneficial and profitable uses," from which three reports have issued, bearing date March 1858, August 1861, and March 1865.

II. The Rivers' Commission, dated 18th May, 1865, "to inquire how far the present use of rivers for carrying off the sewage of towns, populous places, &c., can be prevented without risk to the public health, and how far such sewage, &c., can be utilized;" from which three reports have already issued, bearing date March 1866, May 1867, and August 1867, and further reports are expected.

And III. The Royal Sanitary Commission, dated November 1868, "to inquire into and report on the operations of the sanitary laws for towns, villages, and rural districts in Great Britain and Ireland, so far as these laws

apply to sewerage, drainage, water supply, removal of refuse, prevention of over-crowding, and other conditions conducive to the public health." It is expected that a preliminary report from this Commission will shortly appear.

As he had mentioned on a previous occasion, the British Association had appointed a Committee, of which he was a member, to collect statistics on the agricultural and chemical points of the question; and though he must speak with reserve, he hoped this Committee would soon be in a position to make a preliminary report; and he would now confine himself to the object of Mr. HOPE's Paper.

"The object of this Committee has been understood by its members as that of supplementing the above-mentioned public inquiries, with special information as to the local circumstances and practical experience of various towns throughout the kingdom, and with other positive data relating to the subject, such as the Royal Sewage Commission have pointed out as requisite to be ascertained.

"They have determined, for this purpose, to interpret the word 'sewage' as meaning any refuse from human habitations that may affect the public health; and this interpretation of the term was specified in all applications for information."

Referring to Messrs. BRAMWELL & MARR JOHNSON'S inquiries, with regard to the quantity of land required for the disposition of sewage: to 430 circulars sent out by the Committee, 107 replies were received; and from them and from other sources he had drawn out a table embracing 30 towns. These figures ought to be taken, however, with some qualification. In several instances the sewerage works were not completed; in others, a sufficient quantity of land had not yet been obtained; and others were using the precipitated sewage on land: but they might be valuable

as a record of what had been done up to the present time, as nearly as could be ascertained.

SCHEDULE OF TOWNS *where Sewage is to a greater or less extent utilized, showing the number of persons to the acre irrigated under present arrangements.*

Name of Place.	Population.	Land under Irrigation.	No. of Persons per Acre.
		Acres.	
Aldershott Camp	14,000	250	56
Alnwick	6,000	350 to 400	15 to 17
Banbury	10,800	120	90
Bedford	16,500	55	300
Bingley	10,000	30 to 40	250 to 333
Bury St. Edmund's	14,000	26	538
Carlisle	31,000	110	282
Chelmsford	9,000	50	180
Cheltenham	40,000	120	333
Chorley	20,000	41	488
Croydon	48,000	360	131
Edinburgh	190,000	336	565
Epsom	4,500	100	45
Exeter (St. Thomas)	4,500	150	30
Harrow	3,500	15	233
Hopwood	2,200	6	366
Leek	10,500	130	81
Malvern	5,000	40 to 50	100 to 125
Mansfield	10,000	400	25
Milverton	1,400	4	350
Mold	4,000	6	666
Norwich	78,000	1,350	58
Oswestry	5,000	300	17
Romford	8,000	100	80
Rugby	9,000	65	138
Swaffham	2,000	5	400
Tavistock	9,000	90	100
Tunbridge Wells	16,000	293	55
Uckfield	1,200	4	300
Worthing	6,000	40	150

N.B.—The full population is given, irrespective of the portion sewered.

He himself would estimate the land required, to be about 1 acre to every twenty-five persons, for the thorough utilization of the sewage, and to provide for future increase of population, and for sewage more or less diluted, which were most important provisions to make, as affecting the

public question. A great many of the calculations as to quantity of land were founded upon the growth of Italian rye grass only, which they were told was, in some cases, capable of absorbing as much as 5,000 tons of sewage per acre per annum; but at the Lodge Farm, in some instances, only 1,000 tons of sewage per acre were used, and in others, 2,000, in the course of a rotation of crops. This difference was a material point for the consideration of towns in taking land for irrigation purposes, and would bear out his calculation. He thought Mr. HOPE'S plan of deep draining, to carry off the excess of winter sewage, which would pass through the drains, and then be clarified, or into tanks, and from thence into the river, would be successful. He found that the land taken for irrigation was generally on lease, with the option to purchase; but in some cases land was purchased.

The HON. H. W. PETRE (Associate) said, the subject had engaged his special attention for the last seven or eight years; and during the last two years the important experiments at Lodge Farm had been carried on under his personal superintendence. The results of these experiments he had laid before the public, in a pamphlet published by EFFINGHAM WILSON, Royal Exchange, and to this he would refer the Members for much interesting detail. To Edinburgh was due the honor of precedence in sewage utilization, which resulted from the position of the Old Town, with its natural drainage into the "Foul Burn," which, fertilizing the lands on the low level, produced a handsome profit to the owners, but none to the ratepayers of Edinburgh. In the meantime London had no drainage, properly so called; but the old cesspools were a source of great profit to the farmers around, especially those in Essex; and no well cultivated farm in Essex, within twenty miles, was without one

or more wagons specially constructed to convey this sewage by road or rail. The completion of the main drainage scheme deprives this district of a most important aid to its cultivation. The idea of complete drainage had, no doubt, been rather suddenly taken up, with little consideration either of cost or consequences. There was no question then, of will it pay? It was decided rightly, that the preservation of the health of a town demanded that it should have drainage and a water supply. Rates were imposed and the works done. But then the towns were told that those living on a lower level must not have their water supply contaminated, and the valuable mixture collected must be rendered harmless. Then arose the cry—"Will it pay?" This, however, is a useless question; pay or not pay, it must be done. No doubt there is some importance in the question—Is there any value to the ratepayers of a town in the product of their sewers? He thought the paying value of sewage should be estimated, not by reference to the cost of the drainage of a town or the expense of conveying it to suitable land, but by comparing the cost of distribution and the value of crops produced, with the cost of applying other manures yielding an equal result. To illustrate the additional value given to land by sewage, he might state that Lodge Farm has been held by the Metropolis Sewage Company something less than four years. This autumn he offered to take the farm off their hands, to bring no manure on to the farm, and to pay them for sewage at such a rate as would have given not less than an average of £5 per acre for all the land that was cultivated with sewage. He recommended towns to take a liberal allowance of land; and though 100 acres, for instance, might be sufficient to deodorize the sewage of a given town, it would pay better to take 200 acres, simply because land is best used by a rotation of highly

manured and comparatively unmanured crops. He thought farmers would soon learn to appreciate the value of sewage in the same way as they had within the last few years been induced to use guano and other artificial manures, which now formed so large an item in their expenditure. Mr. Hope and himself were old colleagues in this matter, and he did not wish to disparage the value of the information laid before the Institution, but he thought Mr. Hope expected too much of sewage; it was, after all, only a manure, not an antidote to the vicious capriciousness of the English climate. He (Mr. Petre) had lived some years in a maize-growing country, and came to the conclusion that a crop of ripe maize would be rare in this climate, as it requires something like the continuous heat that is necessary to a vineyard. With regard to the crops that should be grown, it must first be determined whether the application of the sewage is purely for sanitary purposes, a mixture of sanitary and commercial purposes, or commercial purposes only. If for sanitary purposes only, he did not hesitate to say that Italian rye grass is the proper crop, because a given area would deodorize more sewage than any other, being always fit to receive it. If the two objects, sanitary and commercial, are to be combined, other green crops should be added to the grass, because he believed a given quantity of sewage would return more value in cabbage and root crops than grass. If the commercial object, viz., getting the greatest value for the sewage is to be paramount, a minimum quantity of grass should be grown subservient to other green, root and grain crops. The idea would be more apparent, perhaps, if it were said the first purpose would require 100 acres, the second, say 150 acres, and the third, say 200 acres, to deodorize and be exclusively manured by a given quantity of sewage. With regard to the right proportion between

tons of sewage and acres of land, he thought we had not as yet sufficient experience to say precisely, in all seasons and on all lands, that a given quantity of sewage would produce a fixed amount of grass, or roots, or corn. It was clear that a damp summer, following a spring free from frost, would produce more grass with a given quantity of sewage than a dry summer after a cold spring. In like manner, a hot summer, after a favourable spring, would give more corn than a cold summer. Until the Metropolis Sewage Company started Lodge Farm, there had been no large or various practical experiments in the use of sewage; and although the results that have been obtained there were, to his mind, most satisfactory, and had proved, beyond a doubt, that sewage is applicable to all descriptions of crops, it must not be supposed there is nothing more to be learnt, especially with respect to results in increasing the quantity of sewage applied to a growing crop. We know that a certain quantity of sewage has produced a given amount of crop, but we do not know that double, or any other increase of that quantity, would give a proportionate addition to it. Without disputing Mr. Hope's opinion, that rye grass should be sown in August, and should yield 90 to 100 tons of grass for 5,000 of sewage in a year, or that 2,000 tons of sewage should produce 70 tons of mangold, he would state this fact; that on Lodge Farm last year, 53 acres of rye grass had an average of ten dressings of sewage, and produced, in round numbers, £1,350. Whilst, in the same time, 70 acres produced from double cropping 100 acres of other crops, with an average of two and a half dressings of sewage, and produced £1,900. He thought too much importance had been attached to growing rye grass, though very large quantities can be grown; and he had seen as many as ten crops obtained in a year, and as much as 60 tons per acre cut; but

he urged that cropping, beyond a certain proportion of a farm, with rye grass, was not the economical mode of using sewage. To illustrate this, he would take an instance of crops on Lodge Farm last year: ¾ of an acre of early potatoes were grown with two dressings of sewage, and realized over £25, or more than £33 per acre, between February and July, giving a net return of £23 5*s.* per acre. On an adjoining piece of land, following potatoes grown with farm manure, during the same period, a crop of cabbage was grown, realizing by November, £20 net per acre, with the aid of three dressings of sewage. There was no reason why these two crops should not have been grown upon the same piece of land, thus producing £43 net per acre in nine months, with five dressings of sewage, the land being cleared in time to be sown with wheat, which has been done. The crop at the present time looked as promising as the time of year would permit. In contrast with this he might say, that five dressings of sewage would not produce more than two crops of rye grass in four months, if sown in the spring or summer, and eight months if sown in the autumn. These crops might be taken as 24 tons of grass to the acre, which, at 15*s.* per ton, would produce £18, as against the £43 above stated. With respect to draining, it was so much an essential of good cultivation, that he did not think it should be treated as a *special* necessity of sewage farming. So far as Essex and London sewage is concerned, it should be remembered that a liberal treatment of sewage must be applied, before the amount of moisture the land has to dispose of, added to the rainfall, is equal to the medium rainfall alone of a large portion of England. As to the cost of preparing the land for the application of sewage, I may say, that during last year, I have brought into this state about 50 acres of land in various forms of beds from 3 feet to 36 feet wide; this has been

done chiefly by the plough, and the average cost of the formation of these beds has not exceeded £2 per acre. It must be remembered that in the case of the wide beds, such as those of from 25 to 36 feet wide, the formation is permanent; in the smaller, such as those of from 3 to 6 feet, which are similar to the "lands" of ordinary cultivation, the formation must be renewed with each crop, though the dressing of the surface, necessary in some cases, is a permanent improvement. As to the question of the best form and size of bed, it is one that admits of so much difference of opinion and consequent discussion, that I do not think it is advisable on this occasion to do more than state that my present experience inclines me to use wide beds for grass, corn, and such crops as grow thick on the ground, and narrow beds for cabbage, mangold, and such as require space between the plants. The natural formation of the land must in all cases, in a great measure, guide the farmer in this matter. The land on Lodge Farm is exceptionally flat, and consequently in my opinion the most difficult to get into proper formation. With regard to the wheat at Lodge Farm, he was not disposed to admit that this crop was starved or mismanaged, as Mr. Hope stated; its shortcoming was owing to unavoidable circumstances. The land had previously been on the flat, and some difficulty was thus found last year in getting the sewage to flow over the whole; therefore, immediately after harvest, it was put into high ridges, 36 feet wide, by ploughing and some assistance of hand labour. The effect of thus moving the soil was to bring on many spots dead sub-soil to the surface; and the natural consequence of immediately sowing the land was that the plant failed, and was over the whole very thin. In spite of this disadvantage, the yield has been at the rate per acre as follows:—Taunton dean, 3 quarters 5 bushels per acre; long straw white, 4 quarters 3¼ bushels; nursery, 3

quarters 3 bushels; red, 3 quarters 3 bushels. There were 3 loads of straw to the acre. A piece of barley sown in April, with one dressing of sewage, yielded at the rate of 6 quarters per acre. Sugar beet was tried this year to the extent of 9 acres. One 7-acre piece produced 196 tons; and was followed by winter cabbage, that now looks well, and will be a valuable crop in the spring. A piece of mangold 4¼ acres was spoken of, by Mr. Hope, as being starved for many weeks together. He did not think that a crop of 50 tons to the acre needed any apology, as the produce of some three or four dressings of sewage. In reference to Mr. Savill's inquiry, he would add, the gross expense of tillage was £51 and gathering. He considered an important experimental crop was one of mangold, transplanted in the middle of June, and producing, with a very moderate supply of sewage, nearly 19 tons on ¾ acre, having followed a crop of winter cabbage. The following experiments, not alluded to by Mr. Hope, he thought worth attention:—2 r. 14 p. of land, in winter cabbage, was sown in April with mangold amongst the plants. As the cabbage was cleared, room was made for the mangold, and sewage applied, a crop being raised of 15 tons 7½ cwt.—something like 30 tons per acre. In like manner—potatoes, were planted amongst the cabbage, and the crop on 110 rods produced £10 12*s*. One-and-three-quarters of an acre of old rye grass gave, last spring, 32 tons in two cuttings, then was ploughed up, and planted with drumhead savoy, which gave, by December, a gross yield of £54. The land is now in preparation for spring onions. It may not, perhaps, be out of place to refer to the very unusual character of the seasons in the two years during which I have conducted the experiments on Lodge Farm. Last year was characterized by a summer and autumn of unprecedented heat and drought; the year to which these notes

apply was remarkable for a winter of extraordinary mildness, which continued till March, when a real winter commenced, extending, with little mitigation, almost till June, and was succeeded by sudden and excessive heat. The effects of sewage irrigation, observed during these two remarkable seasons, have fully satisfied me that all descriptions of farm and market garden produce may, with ordinary care, be raised with greater certainty and abundance, and with a less cost for labour, than in the ordinary mode. The certainty is increased by the power of applying the manure at the precise time that the crop needs it. The increased adundance is a necessary consequence of this assistance at the right moment. The saving in the cost of labour is manifest when it is remembered that town sewage, applied by gravitation, needs neither horses nor carts, and that several acres a day may be dressed by one man. In conclusion, I cannot but express my great regret that the means of rendering many thousand acres (much in need of it) in the highest degree productive, should be still running to waste into the Thames, as if it were something to be got rid of at any sacrifice; whilst its equivalent, or rather an inferior substitute, is being imported from Peru and elsewhere, at an enormous annual cost.

Colonel Ewart, R.E. (Visitor), thought the question divided itself into principles and details. With respect to principles, the question was what system of drainage towns should adopt. Some towns had tried experiments in the use of deodorizing agents, and others in various plans for depositing the sewage upon the land. Our present system of throwing everything into the rivers was of comparatively modern growth; and though the rivers might, for a certain time, have stood this pollution, it had now become too much for them. The question of purifying the rivers was one of

so. They had about 5,000 people sewered, and they were obliged to take the sewage of a neighbouring institution, numbering 600 or 700 persons more; and he should be very much delighted if he could find a tenant for the farm who would also take the sewage, and relieve the town of the difficulty it was now in. The area of the land was about 400 acres.

Mr. D. Watney (Member), observed that so much had been said about the Beddington and Norwood Irrigation Farms that he would furnish the Meeting with a few further particulars with regard to them. The land composing the Beddington farm was let, in 1859, at 30*s.* per acre. At that time, the Board of Health of Croydon were inundated with injunctions against discharging the sewage into the river, and they resolved to obtain land for irrigation purposes. The total quantity of land taken was 316 acres, of which 289 were placed under irrigation. The rent was, for the greater portion of the land, £5, for the first seven years, and £6, for the remainder of the term, and, for the other portion, £6 per acre. The whole was let to Mr. Marriage at an average of £5 per acre, for nine years, with the right to the whole sewage of the town. The population, in 1861, which drained upon that farm, was about 18,000: it was, now, nearly 50,000. And he might say that, since the Board had taken the farm, they had been subjected to no actual legal proceedings on account of the irrigation. Mr. Marriage's lease expires at Lady-day next, and it had been said that he would not retake the land on the same terms; but he (Mr. Watney) was in a position to say that, as the Board of Health believed there was a very large profit, they were going to use the farm themselves, so that the ratepayers might have the full benefit of the profit to be derived there-

from in diminution of the rates, and they had declined to entertain any proposal from Mr. MARRIAGE for a renewal of his lease. At Norwood, with a population of 5,000, the quantity of land taken by the Croydon Board was 30 acres, of which 28 acres were irrigated; but the soil was different to that at Beddington, being a stiff clayey loam. The Board of Health paid for this £300 a year, to prevent litigation with the owner for a previous nuisance, and had underlet to a farmer for £200 a year. After an occupation of two years the tenant had offered the full £300, which the Board declined to accept, and farmed the land themselves. Last year the gross receipts were more than £700 from those 30 acres of land, and, after paying all expenses (including a rent of £300), there was a profit of about £7 per acre. With regard to under-drainage of sewage farms, our experience was gained from that at Norwood. At Beddington there was a fall of 56 feet from the mouth of the culvert to the outfall into the stream; and he thought, with such a fall, and on such a soil, there was no necessity for under-drainage, as after a few applications of sewage, the large volume of liquid pouring over the soil, would find its way into the drains and so pass into the outfall unpurified, which would leave the lower land without proper irrigation; while the upper would be but imperfectly done. At the Beddington farm it was curious to see the matted masses of fibrous roots which absorbed the sewage; and it was their being on the surface which enabled them to take up so much more sewage than if it was applied to the tap roots in the ground. If the sewage were to pass *through* the land instead of over it, they could not regulate the depth at which it would flow; and if the sewage went down below the level of the fibrous roots it was, to his mind, almost valueless in an agricultural point of view.

so. They had about 5,000 people sewered, and they were obliged to take the sewage of a neighbouring institution, numbering 600 or 700 persons more; and he should be very much delighted if he could find a tenant for the farm who would also take the sewage, and relieve the town of the difficulty it was now in. The area of the land was about 400 acres.

Mr. D. Watney (Member), observed that so much had been said about the Beddington and Norwood Irrigation Farms that he would furnish the Meeting with a few further particulars with regard to them. The land composing the Beddington farm was let, in 1859, at 30*s.* per acre. At that time, the Board of Health of Croydon were inundated with injunctions against discharging the sewage into the river, and they resolved to obtain land for irrigation purposes. The total quantity of land taken was 316 acres, of which 289 were placed under irrigation. The rent was, for the greater portion of the land, £5, for the first seven years, and £6, for the remainder of the term, and, for the other portion, £6 per acre. The whole was let to Mr. Marriage at an average of £5 per acre, for nine years, with the right to the whole sewage of the town. The population, in 1861, which drained upon that farm, was about 18,000: it was, now, nearly 50,000. And he might say that, since the Board had taken the farm, they had been subjected to no actual legal proceedings on account of the irrigation. Mr. Marriage's lease expires at Lady-day next, and it had been said that he would not retake the land on the same terms; but he (Mr. Watney) was in a position to say that, as the Board of Health believed there was a very large profit, they were going to use the farm themselves, so that the ratepayers might have the full benefit of the profit to be derived there-

from in diminution of the rates, and they had declined to entertain any proposal from Mr. MARRIAGE for a renewal of his lease. At Norwood, with a population of 5,000, the quantity of land taken by the Croydon Board was 30 acres, of which 28 acres were irrigated; but the soil was different to that at Beddington, being a stiff clayey loam. The Board of Health paid for this £300 a year, to prevent litigation with the owner for a previous nuisance, and had underlet to a farmer for £200 a year. After an occupation of two years the tenant had offered the full £300, which the Board declined to accept, and farmed the land themselves. Last year the gross receipts were more than £700 from those 30 acres of land, and, after paying all expenses (including a rent of £300), there was a profit of about £7 per acre. With regard to under-drainage of sewage farms, our experience was gained from that at Norwood. At Beddington there was a fall of 56 feet from the mouth of the culvert to the outfall into the stream; and he thought, with such a fall, and on such a soil, there was no necessity for under-drainage, as after a few applications of sewage, the large volume of liquid pouring over the soil, would find its way into the drains and so pass into the outfall unpurified, which would leave the lower land without proper irrigation; while the upper would be but imperfectly done. At the Beddington farm it was curious to see the matted masses of fibrous roots which absorbed the sewage; and it was their being on the surface which enabled them to take up so much more sewage than if it was applied to the tap roots in the ground. If the sewage were to pass *through* the land instead of over it, they could not regulate the depth at which it would flow; and if the sewage went down below the level of the fibrous roots it was, to his mind, almost valueless in an agricultural point of view.

Mr. P. D. Tuckett (Member) said he had been over the Beddington farm some time ago, when the Brighton Railway Company took a portion for their new line to Sutton, and he agreed with all Mr. Watney had said, except as to the drainage. He thought there was some confusion with reference to sewage going over the land and through the land; the object was not to send the sewage through the land, but to provide deep drains, so that when the sewage water was turned off, and the crop left to grow, it should have a dry bottom and not be in a swamp. He believed it was essential the land should be drained; but so deep that the water would be thoroughly filtered; the land being porous, water could not be put upon it without some portion sinking in. That which went down should not be tapped by shallow drains, or by drains imperfectly filled in, as, he believed, had been the case when the water was discharged in an impure state, but should go down to, at least, 4 feet; but when it had got down it must not be allowed to stagnate; but, having once passed over the surface, should then be carried away.

Mr. Watney explained that his remarks, with reference to drainage, related principally to the Norwood farm. It was the lower part of that farm, which was drained 3 feet 6 inches or 4 feet, and the sewage having found its way into the drains, they were obliged to be taken up.

Mr. Graham (Visitor) remarked that, in China, there was a strong precedent for the use of excreta as a fertilizer, where it was used to produce food for the sustenance of a quarter of the inhabitants of the globe.

Mr. W. Menzies (Member) wished to bring back the discussion to the starting point. First of all, what was

the best system of drainage to be followed in towns in the interior of the country? That was the most important question, which they, as surveyors, had to decide; and what he wished to prove was, that the system of drainage, by which the rainfall should be separated from the foul, was the best in every way. He was happy to find that Mr. Hope, on agricultural grounds, agreed with him; and that Mr. Haywood was evidently going in the same road. The latter gentleman objected to a duplicate system of drainage in one's house, but he (Mr. Menzies) did not propose that. Let the inside drains be confined to the foul matters, and the outside ones to that which nature had to remove, viz., the rainfall. They were no more likely to create confusion than two doors to a house. They had abundance of evidence that an undue mixture of pluvial water was not desirable for agricultural purposes; it was simply a question of experiment, which system of the two was most beneficial to the ratepayers. He thought the only proper way of dealing with the sewage was, to pour it over the surface of the land; but where the sewage of towns passed into rivers not used for drinking purposes, they would be rash in saying the right and only method of dealing with it was, to take land for agricultural purposes, because the expense of purchasing land in such situations would, in many cases, outweigh the advantages to be derived. Then again, the towns upon the seashore might be left to deal with the matter in the most convenient way for themselves. He hoped some opinion would be expressed as to which system of drainage would lead to more satisfactory results than were at present obtained.

Mr. Hope (in reply) said: He was sorry no one had brought forward the precipitation system for discussion, for he believed that it only required ventilation to be

exploded. Many of the advocates of that system had been to him with their plans and schemes for reducing it to something like a practical operation; but they had hitherto failed to convince him that it was wise to adopt it. The recently established A. B. C. Company, by the use of centrifugal machinery, appeared to have reduced their processes to something like a practical form; but still it seemed impossible, especially where the pluvial waters were mixed with the foul, to extract the manure at a cost to pay; for, under this system, they must always have a quantity of road detritus, granite, and stuff of that sort, which reduced the value of the precipitate. It was possible, however, in the case of towns surrounded by building land, and situated in a hollow, that this precipitation process might be the lesser of two evils. He would reply as shortly as possible to some of the questions that had been asked, and first,—as to the cost of the application of sewage to the mangold wurzel he had mentioned. The cost of sewage was £10 per acre, and that of cultivation about the same as usual; but the experiment being on a small scale, the expense was probably greater in proportion on that account. He was now ploughing that piece of land for a grain crop, but believing it to be too rich for wheat, he intended to sow it with oats. With regard to the question of drainage and passing sewage "through" or "over" the land, it seemed to him the land instanced at Beddington was over-manured, for the sewage of 131 persons per acre was in excess of the possible requirements of the crops. According to chemical analyses, the excreta of so many persons, for so many days, produced a certain amount of ammonia, phosphates, &c., and these ingredients, used properly, would produce a certain quantity of rye grass, and to exceed these amounts was an agricultural blunder. But flowing, as the sewage did at Beddington,

in large quantities over the ground, it was impossible to get it all "through" the ground, and it must, in some measure, go "over." Rye grass was capable of taking up only a certain portion of sewage, and the roots could only take up that portion. The roots on the surface, however, probably acted also as mechanical obstructions to stop the passage of the more solid matter till it was oxidized and rendered harmless. He thought where stiff clays were irrigated by sewage, the drains ought to be 5 or 6 feet deep, owing to the great tendency of the clay to crack in a line with the drains. The system at Beddington was as bad as it could be, agriculturally, because the crop was almost entirely grass, with no ploughing and no rotation of crops worth speaking of. Dr. Carpenter accused him (Mr. Hope) of working under high pressure; but high farming was high pressure; and the more they got out of the manure the better the farming was; and if, from the sewage of 30 or 40 people per acre, 60 or 70 tons of rye grass per acre were produced, as at Lodge Farm, that was better than 36 tons per acre from the application of the sewage of 131 people, as at Beddington. At Beddington, however, they had no choice. The area of land was insufficient, and, no doubt, grass was the best crop under the circumstances. But they could not obtain the best sanitary results, for sanitary and agricultural benefit would go hand-in-hand, and the best sanitary result would always pay the best. He was asked to give the figures relating to the Romford farm. In reply, he would state, that the expense of bringing the sewage from Romford to the farm was £3,800; and deducting the cost of pumping, on a tolerably liberal scale, the rent he paid for the sewage, exclusive of the farm, would pay the town 10 per cent. upon that outlay. It was a mistake to suppose that there is any mystery or difficulty in the application of sewage to different soils, and that the land

must be prepared at great cost to make it remunerative. A good deal would depend upon the physical nature of the soil. Stiff, unkindly clay would yield a minimum crop, because it was difficult to get a crop from it under any circumstances, and it would take only small quantities of sewage; but, otherwise, sewage was one of the most miscellaneous of all manures, and possessed the most complete adaptability to all conditions. As with every other general manure, it was desirable to have a rotation of crops, because one crop would absorb more of a particular ingredient than another; therefore, in order to exhaust all the properties of the sewage put on the land year after year, they ought to have a rotation of crops. With regard to the separate system, he thought it undesirable to pour a quantity of cold rain water upon a farm in the middle of winter; but, on the other hand, as he saw at Romford, there might be danger to crops, owing to the small supply of water in ordinary country towns. With London sewage they had no such difficulty, for the daily water supply was equal to 30 gallons per head: whereas, in many towns it did not exceed 6 gallons per head, an amount of dilution insufficient for growing crops. It would, in such a case, be necessary to pump water from the adjacent river or stream and distribute it over the farm. With regard to the construction of sewers, (if he might venture to give an opinion in the presence of Mr. Haywood,) he thought the idea that formerly obtained of making a sewer also a drain for the subsoil, was a mistaken one; it should be impervious—iron pipes were best in many cases, or concrete round a core of sheet-iron. That, he believed, was the plan largely adopted in Paris, as the most economical and effectual mode of construction.

The President, in summing up the discussion, said he

thought the sewage question might be divided into two heads—

1st. The carrying away the refuse of our towns in such a manner as to render it innocuous to the people, and to be most easily available for agricultural purposes.

2nd. The distribution of sewage matter in the most economical form, and the agricultural produce to which it can best be applied.

The first head was treated of in the Paper by Mr. Menzies, in which he confined himself principally to the question—"What is the best system of sewers to be adopted, so that the removal of sewage should be continuous and safe in all weathers and in all seasons, without injury to the public health?" and he further observed that "the sewage should produce, if possible, some return when applied to the purpose for which nature evidently designed it, viz.—the re-fertilization of the earth from which mankind derive their food."

Mr. Menzies first discussed the dry earth system, and although he appears to think that it may be applicable in certain cases, such as large establishments, villages, cottages, &c., still (having regard to the various conditions of a large town, and the present feelings of the population on this subject,) water, he assumes, will be the medium by which all the refuse of our towns will be removed. He (the President) had little doubt, however, that for small towns and villages the dry earth system may be applied with entire efficacy, and at much less cost than the system of sewers. For many years past his brother has used dry and burnt earth as the medium for storing and deodorizing the refuse of his house and farm, and most of the urine, blood, the offal of chickens, &c., &c., are thrown amongst the burnt earth, and the whole is deodorized and stored for the turnip crop of the following season. Frequently sufficient

manure for 40 or 50 acres of turnips is thus obtained from the refuse which was previously wholly waste and lost. He mentioned this to show, if it were at all necessary, that earth is a complete deodorizer, and that, in a single establishment, a cheap and effectual way of utilizing the refuse is adopted. He thought it might be considered a somewhat fortunate circumstance that the towns on the banks of the Thames, above London, will not be permitted much longer to pour their poisonous refuse into the river, notice having been given by the Thames Conservators to discontinue the discharge of sewage matter into the Thames, under the Act mentioned by Mr. Menzies. He thought this necessity for the *entire* removal of sewage matter from the Thames would eventually be found the best for the towns themselves, as the quantity of sewage to be removed will be a well ascertained quantity; its application to the soil will be, therefore, more easily managed, and so, in the end, more profitable to the agriculturist and the ratepayers. There were, probably, many reasons why the drainage of London was laid out as it now exists, and he had heard one of the most experienced of the engineers who advised upon the London scheme, and who is still called in as an adviser of the Board, say that water was the best deodorizer; and, as the sewage of London, from the necessity of the case, had to be removed as quickly as possible, the old system of sewers was adapted to the new scheme as far as it could be. At that time the sewage, as it came diluted from London, was said to have no value, or so little, as to be unimportant in considering how to dispose of it. Subsequent experience had shown, however, that this conclusion was erroneous, and we were being daily educated by the sewage farms at Barking, Croydon, and other places, in its application and value; and it seemed now admitted on all hands that the soil is the best deodorizer, quite

independent of the fact, that, in the process of deodorization, the fertility of the land is immensely increased, and the production of food thereby largely augmented. Although much had been learnt as to the application of sewage, very much remained to be learnt. It was shown by the discussion here that there was still a difference of opinion as to what kind of soil is best for the purpose of sewage distribution, and the question had been raised whether land under sewage should be drained, particularly stiff clay land. His own impression, as a practical farmer was, that a thoroughly well drained and well and deeply subsoiled clay would, at least for cereals, be found upon an average of seasons, very productive under sewage treatment. However, he believed it likely that for green and root crops, light soils, either gravel or sand, would be more easily managed, and the produce larger than upon clay soils. In fact, without complete under-drainage, he thought the clays might, sometimes, be better without the sewage. It had remained for this Institution to discuss and help to mature, by the practical experience of its Members, the movement commenced for the utilization of sewage. Even placed in comparison with the large works which have of late years been undertaken, it was not unworthy the deepest attention and consideration, to aid in devising schemes for the prevention of the waste of so valuable a matter, and for the payment, by its preservation, of the cost of the schemes devised for its innocuous disposal. If he read Mr. Hope's and the other experiments correctly, they appeared to show that the present experience is, that the main crops to be depended upon are root and green crops, particularly the various sorts of beet, Italian rye grass, and vegetables. The results of the cereal crops did not appear to have been so satisfactory; and he should say, that oats were the crop most likely to pay under sewage, having regard to the great

variations of temperature or climate to which we are liable in this country. What may be the result of growing Indian corn, all would be much interested in ascertaining. Mr. Hope appeared to consider that, even as a fodder crop, it can be usefully and profitably cultivated. He was sure he expressed the feelings of all, in thanking Mr. Menzies and Mr. Hope, very cordially, for the Papers they had read to them; and he ventured to express a desire that both would, next session, give the result of another year's experience. It was also most fortunate that Mr. Hope had secured the sewage of a considerable town, and a farm upon which to experimentalize; and, as the whole of the sewage must be dealt with, and the accounts of the farm will be free from all complications of financial companies, &c., it would be easy to ascertain to what extent sewage farming can be made profitable, a substantial rent being paid for the fertilizing material. Mr. Hope informed them that this rent is £600 per annum, which represented, in interest, a capital sum of £15,000, an amount which must greatly aid the people of Romford, and tend to induce the towns in the valley of the Thames, above London, to effect similar arrangements. Mr. Bramwell had asked a question which, no doubt, at first sight, appears a difficulty, viz.:—"How the sewage of a town, if it was constant or nearly so, was to be dealt with by being applied to the land which did not (at least so he presumed) require the same amount of irrigation at all times of the year?" There could be no doubt that upon land thoroughly underdrained, sewage matter might at all seasons be applied, so that it may be purified; for in the south and east of England the rainfall is from 20 to 30 inches only, whereas in Wales and the north-west of England it is double that quantity—the two districts being practically equally productive. It appeared, therefore, that the quan-

tity of fluid to be disposed of was not of great importance on well drained soils. By judicious management, the land required for cereal crops might be manured by sewage during the winter months, and during the summer months it would be applied to green and root crops; and, certainly, a sufficiently large quantity of land must be secured to purify the sewage matter to be disposed of. It did not appear to be quite ascertained what is a sufficient quantity of land to completely purify the sewage matter of 100 people, and he had no doubt it would be found that the quantity of land required, would greatly depend upon—whether it be light land or clay—as well as upon the crops to be grown. And this may probably account for the very different statements that had been made. Shortly, therefore, in conclusion, he thought he might safely say—

1. That no exact rule can be applied to the system of drainage of all towns; that it must be left to the skill and experience of the engineer and surveyor, under the special circumstances of each town, to lay out the proper means of purifying it, and of turning to account the fertilizing matter; but, that all things considered, it is expedient in most cases to separate the sewage matter from the rain-fall.

2. That it is now admitted, that the land is the proper place upon which to distribute all sewage matter, in fact, to return to the soil the elements of fertility, which have been taken from it; and, that it is a waste, in the widest sense of the word, so to throw away such a valuable fertilizing power, as in many cases to cause the destruction of life, and in all cases at an utterly useless and unnecessary expense.

The President added that he had received a letter, showing how difficult it was for some towns to ascertain correctly the proper cost of laying out land for irrigation.

The letter to which he referred was written by the mayor of a large town in the south of England, where the sewage had been taken to the land, and the estimated cost of the application of the sewage to 50 acres of land, in a good situation, was no less than £5000 or £100 per acre, in contrast to Mr. Petre's statement that it could be done for £2 per acre. There must be some marvellous difference in respect of this distribution.

ORDINARY GENERAL MEETING,

Monday, February 7th, 1870.

JOHN CLUTTON, PRESIDENT, IN THE CHAIR.

ON THE ENFRANCHISEMENT OF COPYHOLDS OF INHERITANCE, BY E. SMYTH, ASSOCIATE.

The discussion on this Paper was resumed by

Mr. G. TAYLOR (Associate), who said—With regard to the proper terms for the enfranchisement of copyholds, he would direct the attention of the Meeting to the Copyhold Act of 1841, 4 & 5 Vict., c. 35, the preamble of which recites "That it is expedient to provide means for an adequate compensation for Rents, Fines, and Heriots payable to Lords of Manors in respect of Lands of Copyhold and Customary Tenure." The Act itself, however, provides no defined basis for calculating this compensation, and therein differs from the Tithe Commutation Act, which declared that the basis of value of rent-charges should be the receipts of the tithe owner during the seven years preceding Christmas 1835, with a power to vary the amount so ascertained by increase or decrease, as the case required, to the extent of 20 per cent. Such adoption of a definite principle was obviously attended with great advantage, but it might well be doubted whether a similar course could have been pursued in the enfranchisement of copyholds. Many difficulties would have arisen, and, to his mind, the great obstacle would have been the difference between the value of copyholds, in or near to cities and towns, and those in rural districts. It might very fairly have been expected, from the great

outcry there had been against copyhold tenure subject to arbitrary fines, that even upon the passing of the Voluntary Act, which gave lords having a limited estate, the power to enfranchise, there would have been a large amount of business brought to the office of the Copyhold Commissioners. But such was not the case, as would be perceived by reference to the annual reports laid before Parliament, which showed,—in the years 1841, 1 enfranchisement; 1842, 12; 1843, 29; 1844, 39; 1845, 56; 1846, 56; 1847, 52; 1848, 25; 1849, 30; 1850, 37; 1851, 64; 1852, 44. 445, in 11 years —an average of 40 per annum.

The reason he ventured to assign was this—that not only the copyhold tenants, but the Copyhold Commissioners, were in ignorance as to what was an adequate compensation for the incidents relating to copyhold tenure. The Commissioners, however, applied their attention to obtaining the best information they could as to proper terms for enfranchisement, and with this view addressed a communication to various stewards of manors, soliciting information as to terms adopted within their experience.

Several stewards forwarded such calculations, and the information so obtained, formed the basis for the preparation of the first table that was issued by the Copyhold Commission prior to the passing of the Act of 1852. The paper in connection with the first table of terms stated:—

"The Commissioners are hardly yet in a position to give distinct and positive opinions on the precise value of the respective rights of Lord and Tenant, in answer to all the applications made to them from different parts of the kingdom, and from Manors very differently circumstanced. Under these circumstances, they think it may be desirable to print the following Tables, as likely to assist persons anxious to avail themselves of the Act for Enfranchising or Commuting Copyholds, but doubtful as to the terms they ought to propose or agree to."

After the passing of the Compulsory Acts of 1852 and 1858 the work of enfranchisement increased. With regard to the compensation for the lord's rights, the following incidents would have to be considered:—

1. Timber.—The compensation to the lord under this head appeared to him to be simple; for the lord had only to prove his particular right in the timber, and the valuer could then exercise his own judgment in dealing with it. There were manors in which the lord claimed the whole of the timber subject to an allowance for repairs, and there were others in which the lord had a right to a proportion varying from one-half to one-sixth.

2. Minerals.—It was impossible to give any data for including this right in an award of enfranchisement, as it must entirely depend upon the subsoil, and whether any mineral exists. The right cannot be included in the enfranchisement, unless the lord is a consenting party, under the 48th section of the Copyhold Act, 1852. The several annual reports state certain sums per acre for the extinguishment of this right of the lord.

3. Quit Rents.—In the first paper referred to by Mr. Smyth, 25 years' purchase was stated to be the compensation for quit rents; but the Copyhold Commissioners now advise 28 years' purchase for this particular incident. As the quit rent is usually small in amount, valuers should have no difficulty in settling the money value for this right, though some were of opinion that 25 years' purchase was ample consideration—and they referred to the 32nd section of 23 & 24 Victoria, cap. 93, passed 1860, which contains a power for compulsory redemption of rent-charge in lieu of tithes, not exceeding £15, at 25 years' purchase.

4. Copyhold subject to Fines Certain.—In the first paper issued by the Copyhold Commissioners, prior to the passing of the Compulsory Act of 1852, the terms for the enfranchisement of copyholds of fixed fines, (which is

usually two years' quit rent,) was stated to be one year's value. But parties interested in manors where the copyholds of this nature exist, complained that such terms were excessive, and the Commissioners now advise, as proper terms for the extinguishment of such fines, from one and a-half to two and a-half fines, according to the age of the tenant. If the tenant be 20 or under, a fine and a-half; if 52, two fines; and if 70 or upwards, two fines and a-half; and about one-fourth of a year's net value of the property to be dealt with.

5. Copyhold for Lives.—The Copyhold Commissioners did not now offer any advice as to terms for the enfranchisement of this class of copyholds, as there were sufficient tables published to guide valuers,—and, in his humble judgment, fair to both lord and tenant,—and, therefore, it would be well to ignore the terms of six years' value for copyholds for three lives, and four years' annual value for copyholds for six lives. He should here mention that the compulsory powers of the Acts did not apply where there was no right of renewal.

6. Heriots.—In the paper of terms first issued by the Copyhold Commissioners, the consideration for this incident was stated to be two and a-half heriots on the average of the last three heriots. But it was now recommended, that the sum to be paid for a heriot might be calculated on the same principle as the compensation for an arbitrary fine—that was to say, by substituting for annual value (when the heriot was payable on death and alienation) one-half of the value of such heriot; and when the heriot was payable on death only, one quarter of the value of such heriot, and then applying the table as in the case of a fine.

7. Copyholds of Inheritance subject to Fines Arbitrary.—He now came to his last incident of copyhold tenure, and must refer to the table prepared by the Government Actuary under the direction of the Copyhold Com-

missioners, after much consideration on their part, and which had been in existence since 1855. It was based upon this principle, that it would be equivalent to a fine of two years' annual value about every fifteen years, which appeared to be the average interval of change of tenure in ordinary copyholds subject to fines arbitrary, and the table appeared to have given satisfaction. It was well known that parties had purchased manors since the passing of the Copyhold Act, 1852, for the sole purpose of compelling the tenants of the manor to enfranchise, and although in such cases the lord was subject to all the expenses, a very considerable profit has been made by the transaction. It must be borne in mind that the table was not binding upon the parties, but had been issued for the purpose of assisting lords and tenants in arriving at a fair consideration for enfranchisement. He quite concurred with the observation made by Mr. F. J. Clark, that the table might not be applicable to the manor of Hampstead—which was what he termed a Metropolitan manor—and the interval of changes in the manor might be more frequent than fifteen years. An objection had also been raised to the table on the ground that if it was applicable to land it could not be so to house property. His answer was, that whether land or building, the lord could claim two years' annual value for a fine on death, and one and a-half years' annual value upon alienation. But the practice was (and he thought it a just one) to arrive at the net annual value of house property, by deducting from the gross annual value all outgoings, including the expense of ordinary and permanent repairs. The table might then be applied in cases of house property, and the tenants could not complain of an exacting demand. He would venture to ask the gentlemen present not to ignore it, because he knew that it had been the means of producing a harmonizing spirit between lord and tenant, and between lord's valuer and tenant's valuer, in adjusting the proper

terms for enfranchisement. With reference to the abolition of copyhold tenure, he remembered that the late Rev. R. Jones, formerly a Tithe and Copyhold Commissioner, had observed to him, that "a compulsory Act would be passed, and a given time be allowed, for lords and tenants to enfranchise the copyholds. When Parliament considered that a sufficient time had elapsed, a short Act would be passed, enacting, that within a period of five or ten years, copyhold tenure should be extinct."

Mr. W. Brown (Member) agreed with Mr. Ryde that the time had arrived for the total abolition of copyhold tenure, and though he had found, in his own experience, unwillingness on the part of some lords and stewards to enfranchise, he had failed to discover any substantial reasons for the objection; for it was clearly to the interest of stewards, who, in many cases, held office only till a change of ownership, to promote as many enfranchisements as possible. In certain manors, even where the fines were wholly arbitrary, enfranchisements had been carried out with perfect ease and to the benefit of all parties; he would instance particularly the important manor of Chesham, in Bucks, and it would be advantageous to all persons concerned if it were always so. There must be some reason, however, why enfranchisement had not proceeded at a more rapid rate. In the case of a manor where he resided there were more than 150 copyholders, and up to the present time there had been but 45 enfranchisements, and in another where there were 40 copyholders, but 6 enfranchisements in 30 years. The cases of hardship spoken of by Mr. Ryde might be met by rent-charges, and he thought that the Copyhold Commissioners should have power given to them to control such cases. Mr. Smyth had referred to the rights to mines and minerals. These rights in many parts of the country had no meaning, for what was understood by the

term—was it sand, was it gravel, was it clay? or what was it? The expense of introducing this exemption into conveyances of enfranchised copyholds, and into conditions of sale, cost the parties more money than the so-called minerals were worth. The author of the Paper remarked that the payment of a fine to enable parties admitted before 1852 to enfranchise, had lost its pecuniary importance; but he (Mr. Brown) did not think that it had, for there were still many charities, corporate bodies, trustees, canal companies, and others on the roll, who were likely to remain a long time without change. In the case of railways it was provided for, but not in the old Acts of Parliament. He was rather in doubt as to the charge in Mr. Smyth's table for a child of six years old. It differed from the insurance tables, which charged more up to 16 years of age than after that period, because of the liability to the usual disorders of childhood. He did not see much difficulty in dealing with building land, subject to fines arbitrary, for as soon as the fair proportion due to the lord had been determined for the land, considered as agricultural land, it would be easy to assess the value of his interest in it as building land; for if the lord was entitled to one-tenth or one-twentieth of its value as agricultural land, he was entitled to the same proportion as building land. He did not gather that the author proposed to deal with prospective values, which would be very unfair, but with present values only. With regard to heriots, he would observe that they might be defeated, which was a drawback in the lord's interest to be borne in mind. He knew a case in point, in which an owner of property, liable to four heriots, died, and the steward of the manor sent to seize four beasts, as a matter of form. The heir-at-law, however, held a deed of gift from his father, the owner of the estate, demurred to the payment, and counsel's opinion having been taken, the claim was defeated. As to the question of

compensation for quit-rents, the excessive expense of collection was a considerable drawback in some manors, and the lords must be gainers by their being extinguished. To illustrate the inconvenience arising from the existence of copyhold tenure, he could mention a singular case which occurred to a relative of his, who purchased 8a. 2r. 13p. of arable land in one field; of this 3a. 1r. 36p. were freehold, and the remainder copyhold of four different manors. The court fees amounted to £37 2*s.* 10*d.* exclusive of the private solicitor's charges. There was a freehold conveyance of the property, and a separate surrender of each portion of copyhold. Surely there ought to be something more simple than this. For the information of the Institution, he would mention a case which had come under his notice, as umpire between two of its members, in the Manor of Harrow, (specially referred to by Mr. Rouse in his book on Copyholds.) Before he commenced his duties, the tenant's solicitor called upon the Commissioners to define the custom of the manor, and during the three days' enquiry it was found that several extraordinary fines had been paid, in some cases far exceeding the fee simple value of the property; sometimes equal to it, and sometimes less. The decision of Mr. Wetherall, who conducted this inquiry for the Commissioners, was as follows:—

1. That on admission the heir-at-law pays no fine.
2. That a copyhold tenant on the court rolls pays no further fine for his admission.
3. That the fine on first admission is not limited to any number of years, but that such custom is not reasonable and good.

This principle they would find had been maintained in every subsequent decision, by the judges, who always laid it down that the fine must be a reasonable one. With regard to the expenses of enfranchisement of small ownerships, he would quote what had come under his own ob-

servation, and this in fine-certain manors might account for the little progress made.

Manors of A. B. and C., County of Herts. Fine Certain of One Year's Quit Rent. No Heriot.

	Case 1.	Case 2.	Case 3.	Case 4.	Case 5.
		IN TWO MANORS.		FINE CERTAIN OF 2 YEARS' QUIT RENT.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Annual Quit Rent .	0 1 2	0 1 3½	0 0 5	0 0 1	0 1 0
Annual Value. . .	5 0 0	11 16 0	3 15 0	20 0 0	37 10 0
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Lords' Compensation, Mines & Minerals excluded	3 3 6	5 3 9	3 10 1	5 14 0	10 0 0
Fees where Tenant admitted before 1852 .	5 1 2	...	...	...	...
Stewards' Fees . .	24 10 0	35 0 10	11 9 8	12 9 6	12 9 6
Valuers' Charges .	1 1 0	2 2 0	1 1 0	2 2 0	1 1 0
Private Solicitors' Charges, and Stamps, &c. . .	5 2 2	14 4 5	8 16 10	5 0 0	Own Case
£	38 17 10	56 11 0	24 17 7	25 5 6	23 10 6
	2 to 3 Acres.	6 Acres.	1½ Acres.	House & Premises.	Moiety of Houses.

Mr. E. J. Smith (Member) said that there were two or three points in Mr. Smyth's excellent Paper to which he would like to refer, with the view of aiding the discussion of the subject. The difference between the three scales of values which Mr. Smyth had contrasted might be shortly stated thus,—that in the Commissioners' tables the difference between the age of 70 and that of 20 was two years' purchase; in the next table (Mr. Rouse's) the difference was a single year's purchase; and in the third (Mr. Smyth's), the differ-

ence might be stated as $1\frac{3}{4}$ year's purchase. These differences arose from various estimates of the frequency of alienation, and he thought that their friend Mr. Smyth and, *a fortiori*, the Copyhold Commissioners, had over-estimated the difference in value between those ages. Sufficient importance had not been given to the fact that ordinarily it was the older persons who purchased estates, and the younger who disposed of them. He had found that the average age of persons purchasing over those selling estates was fully half as much again; it was not until persons had attained a certain age that they had much money for the purpose of investment. In copyhold cases this had a twofold action. The junior persons, in a large number of cases, as Mr. Smyth himself had shown, pay the fine and sell the estates soon after they come into possession of them; the purchasers, generally much older men, pay a second fine, and hasten the time for a third one also. He, therefore, considered the values in the second table most in accordance with the facts as they occurred.

The Copyhold Commissioners had been found fault with for estimating fines at 3 per cent. in every case, it being contended that they ought to estimate them at 3 per cent. for landed estates, and 4 per cent. for houses. If £1,000 were received by any person, it was of no consequence to him whether it had been produced from acres, houses, rents, or anything else: in this respect, therefore, he agreed with the Copyhold Commissioners in taking the whole of the fines on the table of 3 per cent. Escheats did not often arise. In his practice, five cases only had occurred in 28 years.

Mr. Pownall, in his letter to the Commissioners in 1856, referred to three points. The first was the frequency of alienations; the second, the theory that fines from houses should be estimated on a different scale to fines from acres; the third was that the lord and tenant ought to be regarded

as joint owners. Now, it was true they were the joint owners in one sense, but the lord had by far the best kind of ownership. He would give an instance in illustration of what he meant. Supposing any one had a house of the value of £100 per annum, estimated as freehold at 18 years' purchase, = £1,800; if there were a permanent charge on it of £10 per annum, the £10 was not taken off the £100, and the remainder put at 18 years' purchase; the £10 was put at 25 to 30 years' purchase, and that amount being deducted from the £1,800, the remaining £90 would stand at about 17 instead of 18 years' purchase. This is done because the actual £10 is a certainty which must be paid whether the house is empty or occupied; whether the £100 is received or not, this charge must be paid. It therefore is estimated as a certainty, and the £100 as a comparative uncertainty; and so in the case of copyholds though the lord and the tenant may be called in a sense joint owners, the income derived in the form of fines is in fact a first charge on the property; and they are owners of two very different kinds of estate, having regard to the security of each.

That which he understood to be the chief difficulty with respect to copyhold enfranchisement, was how to deal with the portion of the estate beneath the surface, and what was included in the term of "mines." Now, to win a deep seam of coal, an expense of from £30,000 to £300,000 must be incurred, and it was against the general interest, as well as equity, that the ownership beneath the surface should go to each person who enjoys only the surface; for, unless a range of (say) 1,000 to 4,000 acres can be obtained, such coal can never be won. The existing system, therefore, whereby the lord has the coal in large masses, is to the interest of the whole community. Under existing Acts, if the lord enfranchised the surface, each copyholder becomes the freeholder not only of the surface but of all between the

surface and the coal, and of all below it, and all the owner can reserve is the coal, and the power of entering to get the coal; and this fact might, in a number of cases, prevent the working of thousands of acres of coal. The person on the surface should have the entire ownership of the surface, but subject to the reservation of all beneath to the lord; and this principle was regarded in an Act of 1844, which provided that, in the county of Cornwall, the copyholders should have the surface, but that everything under it should be reserved to the lords, who should give compensation to the owners of the surface for any damage or hindrance occasioned by their mining operations. Where there are minerals, their value very largely exceeds the value of the surface, both in a pecuniary and in a national point of view, and the owner of the fundus, and not the owner of the mere surface, should be the freeholder.

Mr. R. C. Driver (Member) said that Mr. Smyth had touched but little upon the subject of licenses to demise. He would mention one instance in which he was concerned. A copyhold tenant had a plot of land about 300 feet square in the midst of his estate. The lord declined to enfranchise, which he had the power of doing prior to the Compulsory Enfranchisement Acts being passed. The tenant then obtained from the lord a license to demise for a term of about 75 years, and then made his roads and sewers, and converted the 300 square feet of land into building land, and now nearly the whole of it is covered with houses of £25 or £30 a year each. In course of time the copyhold tenant died, and in his will left trustees in charge of the property for his heirs, insisting upon their enfranchising. The result was, that application was made for admission, and then enfranchisement. The incident of this license is, that the lord denies the right of the trustees to be admitted upon anything else than the full value of all he finds upon

the land, and of the ground rent value of the part uncovered. There are three trustees, and for admission the lord claims two years' value from the first trustee, one year from the second, and half a year from the third; and after this is paid, the trustees have to enfranchise. The consequence is, that the lord will obtain, if he has his legal rights, more than the copyhold tenant can ever get out of the property.

Mr. D. Watney (Member) said that, with reference to the incident of mines and minerals, he would call attention to two manors near London — Hampstead and Hendon — where the lords refused to include them, and it was a question what the reservation was worth. In the case of brick earth he did not think it amounted to much, for the owner, he believed, could burn bricks for the purpose of building on the land itself, and could use gravel, flint, or building stone in the same way. A remark had been made about the difficulty of collecting quit rents, but he thought the steward usually obtained all arrears on an admission, so that, practically, they were never lost. He would like to know whether the lord, in the majority of cases, could refuse to allow timber to be cut for repairs. It was rather a moot point. He believed the tenant was entitled to timber for that purpose. Assuming that the lord refused permission or a license to cut timber, what remedy had the tenant?

Mr. J. E. Coxwell (Associate) said, with regard to small copyholds in the country, the expense to which owners would be put in dealing with property if converted into freehold, would be much greater, as the vendor would then have to show the lord's title as well as his own. The present system of the Court Rolls was analogous to the Land Registration Act, as it afforded a register of the dealings with the property. Under the Land Registration

Act, mines were not included unless specially mentioned. He thought, therefore, that the establishment of local Courts of Registration, which the stewards of manors might have charge of, would be desirable, if compulsory enfranchisement were insisted on. The Statute of Limitations would be a bar to the collection of more than six years' arrears of quit rents, and a mandamus would lie to compel a steward to admit, notwithstanding the arrears.

Mr. Philip D. Tuckett (Member) said, that although the tables issued by the Commissioners had been criticized as unnecessarily minute in their large number of places of decimals, he questioned whether they were not, in one respect, more practical than the proposed new tables, inasmuch as the old tables made a maximum difference of only two years' purchase between the best and worst lives, and the new ones two and a-half; and as the fine on alienation was usually only one and a-half years' value, he thought if the difference were increased beyond two years' value, it might be found in some cases, where the properties were large and valuable, worth while to surrender to a young trustee for the express purpose of enfranchisement, notwithstanding the costs; and if that were the case, it would show that the difference was excessive. He should like to call attention to a point which had not been touched on in the Paper. Every one seems agreed that fines on land should be calculated on the 3 per cent. tables, and one or two speakers wished to apply the same rate to houses, though he himself thought the reduction to 4 per cent. was justified by the probable depreciation in the amount of future fines-arbitrary, as the houses became older and of less annual value. But he was at a loss to understand how surveyors who adopted these rates could, when they came to building land, and had to calculate backwards, obtaining the rental value from the value in fee, calculate, not at 3 or at 4 per cent., but

at 5 per cent. If a certain share of the latent value were claimed by the lord as a separate item, he could understand the argument, though he doubted whether it ought to be pressed when the rental was taken at building rates and not merely as grass land; but, speaking from experience, that was not the practice with the surveyors to the principal manors round London. What was done was this—assuming, for the sake of illustration, that in a fine-certain manor it was agreed that a lord should receive a quarter or a half year's purchase for his rights, and that a piece of undeveloped building land was considered to be saleable at £800 per acre, it would be found that the quarter and half year's purchase would be put at £10 and £20 per acre, respectively, taking the rental at a twentieth instead of at a twenty-fifth, as it would be at 4 per cent. Now 20 years' purchase was all very well as between selling for cash, or creating ground rents under a building agreement which might or might not be carried out—between a certain sale and uncertain prospective ground rents. But the argument was entirely reversed as between a certain cash payment to the lord and a very uncertain and future realization of the land. It might be said that, when covered, the future value of the land would really be considerably greater; but then the lord got his money at once instead of waiting for it, and it is often very doubtful whether building land increases in value fast enough to keep down the interest, after it has once attained to anything approaching a building price, and cases are not wanting in which it has become actually reduced in value. He should be very glad of some further expression of opinion on this point, and to know how far the practice of the profession is settled upon it, as, when these cases are referred, it is absolutely needful to have some settled principle to go upon.

Mr. Smyth, in reply, stated that the three remarks read

by Mr. Clark upon the last occasion had regard, as might have been expected, to the salient points of the subject. The first, having reference to the peculiar effect of alienation fines, had, he supposed, struck upon many of them as being the most knotty point of all; but he believed that the difficulty would be found to be rather in appearance than in fact. For an existing tenancy at the age corresponding with the average holding, the abatement from the value of the immediate perpetuity of the fines must be a single fine; for a tenancy at the oldest possible age, the abatement is virtually nothing. And as regards the graduation of the deductions for other ages, he did not see reason for supposing but that copyhold tenancies at successive ages relatively diminish in duration very much in the same proportion that absolute lifeholds do, more particularly when he called to mind the following circumstance:—The almost invariable custom in manors is, that a purchaser of a copyhold is not compellable by the lord to be admitted tenant, the natural consequence being that if the tenant on the rolls happen to be a young life, the purchaser would be likely to hold upon that life, and to postpone the alienation admission; but, if the tenant on the rolls happen to be an old life, then the purchaser would be likely to get himself (or a young nominee) at once admitted on payment of only the alienation fine, for if he were not to take this course, the old tenant would soon die, and then the purchaser would have to pay a death fine in addition to an alienation fine. He conceived that such occasional double fines (death and alienation), as Mr. Smith had referred to, would have often arisen simply from an unlucky delay by a purchaser in getting admission. Upon the whole, the probability of an alienation fine, like that of a death fine, seems to increase with the age of the tenant on the rolls; consequently a life-annuity table might be satisfactorily adopted in the graduation of the copyhold enfranchisement table, and as in lifeholds, so in copyholds, a

tenancy at the average age of tenants on their admission might be considered to be the one of average duration. Upon the second point, the rate of interest to be assumed in capitalizing the fines, he did not consider that it should be the rate adopted in capitalizing the annual proceeds of the particular property subject to the fines. Upon an enfranchisement the lord should receive a larger proportion of the selling value of house property than of that of agricultural land, if only because each of the fines is a larger proportion of it. His own views as to the rate of interest accorded with the very clear explanation given by Mr. Smith, except that he preferred to capitalize fines from houses at 4 instead of 3 per cent., as an equivalent for the diminution which commonly takes place in the annual value of such property, (and consequently in the fines,) until the time arrives for rebuilding it. For enfranchisement of a country cottage, however, where reliance cannot be placed upon its being rebuilt on the same site when naturally decayed, he would be disposed to charge somewhat less than the year's purchase in the enfranchisement table. Upon the third point, building land, the opinion expressed in his Paper appeared to be much in accordance with Mr. Pownall's. With respect to the average age of tenants upon their admission, he had conjectured this to be as young as 35. Remembering that often the heir is not the eldest child, nor even the eldest born son, the average age of 35 upon inheritance would point to the average age of fathers at death being about 65, which seemed to him to be quite old enough to accord with facts. And although a purchaser of a copyhold is commonly older than an heir, yet if much older he would get a young nominee from his own family to be admitted in his stead, and so the average age, 35, is probably maintained. They were indebted to Mr. Rouse for having pointed out the very important question of the comparative frequency of alienation fines from different properties. Since

he (Mr. Smyth) had the honour of last addressing them, he had taken the extreme case of a manor in a suburb of the Metropolis, into which building operations are extending with considerable rapidity, and he found the average interval between the fines to be only 12 years. To recapitulate, then, upon this point:—In his Paper he had submitted to them the case of a manor in a retrograde district, yielding fines about every 20 years, which would correspond with the last column of the enfranchisement table for lands or houses respectively; another manor, in an ordinary agricultural parish, showed 18 years' fine-interval, which indicated the last column but two; another manor, in the immediate neighbourhood of a city which, until quite lately, might have been regarded as almost stagnant, showed 16 years' fine-interval, which pointed to the central column; and now he instanced the case of a manor close to London, giving 12 years, or corresponding with the first column. These results showed a natural and well-marked gradation, sufficient, he thought, for their general guidance in selecting a fine-interval column for any case arising in practice. Having regard to the very wide range of years' purchase, which was thus seen to be needed in the horizontal lines of the enfranchisement table, he could not but feel surprised that any one should still be satisfied with a single column of years' purchase, such as the Commissioners' table of 1855. Life assurance, for example, began with very indiscriminating charges of premium, but the circumstance that assurances had been so effected was properly adjudged to be a most inadequate reason for continuing a very rude system, when a better was seen to be available. For the additional consideration which he proposed should be paid to the lord in respect of change of tenure, he had, he believed, given substantial reasons in his Paper; and he was hopeful of converting Mr. Ryde to the same view, inasmuch as he already agreed that the two interests did not make up the whole, and if so, it was unreasonable that the

tenant should have all the benefit of the difference. As regards title, a copyholder enfranchising under the Acts, continued to possess his own, and did not depend upon that of the lord. The simplicity of a copyholder's past title would facilitate a registration of it at the Land Registry Office, where he might secure advantages for the future similar to those which he had previously possessed in this respect. Upon the question of the value for enfranchisement in the very peculiar customs of some manors, referred to that evening and in the Paper, he could not then enter—such cases were fitted for special consideration in the course of their private practice. He concluded by drawing attention to Dr. FARR's remarkable work, "The English Life Table, No. 3."

The PRESIDENT, in closing this discussion, would confine himself to circumstances within his own knowledge. Mr. RYDE had asked him at a former Meeting to describe the customs of the Manor of Old Paris Garden, and in compliance with that wish he begged to present the following particulars:—

"*The Manor of Paris Garden, Surrey.*—About the 20th year of Queen Elizabeth the copyholders of this manor purchased the freehold of their estates, but meaning that they should continue to be held by copy of court roll, they took a demise from the lord to trustees for a term of 2,000 years, of all the messuages, lands, &c., copyhold in the parish of St. Saviour, parcel of the Manor of Paris Garden held thereof by rents amounting in all to £8 5*s.* 4*d.*; the said rents, and the court baron, and the profits thereof in Southwark or elsewhere in Surrey, being copyhold of the said manor. They also took a grant to other trustees of the freehold of those copyhold estates. On the same day the lord sold the lordship and manor of Paris Garden, with the manor house, but excepted the copyholds and court baron so

granted as above. The trust is from time to time renewed, and the copyholders surrender and are admitted as in other manors, except that they pay no quit rents, heriots, or fines. The conveyance is short and simple, with the full benefit of a register, and the estates sell at a better price than freeholds. The eldest son is heir. The bailiff has an ebony rod, the ends of which are enclosed in a silver plate, on one of which are the arms of England, surmounted with a crown between the letters E.R., and under them is inscribed, 'The Rodd for surrender of Copyholds in the Manor of Paris Garden.' The inhabitants of this manor claim a right of voting at the election of members of Parliament for the borough of Southwark, but the right is denied, and it does not appear that the question has ever been legally decided. Some of the copyholders have claimed to vote at the election of members for the county, alleging that they have an equitable freehold in their trustees. Their votes have been received, but how rightly admits of question, as they still hold by copy of court roll, 7 & 8 W. II., c. 25, s. 17.

"The lordship of the manor being thus vested in trustees for the copyholders, there are no fines, heriots, or other like payments, except £3 3*s.* on surrender and admission, 'for the purposes of the manor,' and irrespective of steward's fees.

"*Forfeiture* takes place if no heir or devisee claims after three proclamations, or if tenants demise for more than twelve months. Instances of forfeiture have occurred, and the "*lords*" receive the rent of a forfeited estate.

"The *steward's fees* are £3 3*s.* for license to demise, and £1 1*s.* for its enrolments. Licenses are granted as a matter of course."

Reverting to the Paper before them, he would more particularly refer to one or two subjects only. One was the question of minerals, timber, and other property of that description. He had always supposed, and he did so still, that the lord was the owner of the soil, the tenant being

owner of the herbage only; and, undoubtedly, the lord was owner of everything under the surface, though he could neither work the minerals nor cut the timber without the consent of the tenant; but all these various incidents were ruled by the customs of the different manors. Mr. Ryde truly said the value of the lord's and the copyholder's interest together was not equal to the value of the whole. He confessed it was new to him that if there were two interests in any property, that one party should alone be benefited by the conversion of that property into money; and surely the lord was entitled to some portion of the improvement under the 16th section of the Copyhold Act of 1852, which enacts that "the valuers shall take into account the facilities for improvements . . . . and all other circumstances affecting or relating to the land, and all advantages to arise therefrom, and shall make due allowance for the same." He felt strongly that the lord having the right of the soil, if he parted with that right should participate in the benefit which the tenant might gain by the conversion; and he scarcely knew an instance in which that principle had not been conceded where the matter had been fully discussed. With regard to Mr. Tuckett's suggestion that he did not understand why $\frac{1}{20}$th part of the value of the fee simple of building land should be taken as rent for the purpose of enfranchisement, he (the President) thought it was assumed because it was so much more easy to ascertain the value of building land at its selling price. The lord need not wait for his money, because he might compel the tenant to accept the enfranchisement, though the lord generally in such instances would not do so, because the land was growing in value, and in nine of such cases out of ten it was the tenant who compelled the lord to enfranchise. If he was right in the assumption that land frequently selling for (say) £400 per acre was worth more when built upon than £20 per acre, the tenant was a gainer

by assuming a portion of the fee rather than taking half a year's purchase upon it. He found that it depended upon custom whether a tenant might cut timber for repairs—usually the tenant had not the power. The question whether the timber was assigned or not was entirely regulated by custom. With regard to the finable value of land and houses, his experience was that houses were more frequently finable than land. It had been contended by some gentlemen that copyhold tenure in this country should be extinguished; but he thought it would inflict hardship upon a great number of people, especially trustees, widows, and children, who would be placed in serious difficulties if the compulsory powers of the Act were enforced to sweep away the whole of these tenures. As matters at present stood a man could, at any time, enfranchise the whole of his property, if he wished to do so. He did not think it wise or prudent hastily to force on enfranchisements. He quite agreed that fine-arbitrary manors should be got rid of; but in the case of fines-certain the same objections did not apply. They were often the best tenures a man could have; his title was simple, always registered, and the property could be transferred at small expense. He agreed with Mr. Smith that it was impossible in mining districts to grant to the surface tenant rights which might obstruct the working of minerals worth, perhaps, a thousand times more than the surface.

Mr. C. Stephenson (Member) begged leave to express his hope that it would not go forth that in the case of great hardships from enfranchisement, there was no remedy at hand. He suggested that by section 35 of the Copyhold Act, 1852, the Commissioners had power to suspend any case "where any especial hardship or injustice would unavoidably result from any compulsory proceeding."

FARMING COVENANTS.

By ELIAS PITTS SQUAREY, Member.

Read at the Ordinary General Meeting of the Institution of Surveyors, *February 21st*, 1870.

JOHN OAKLEY, MEMBER, IN THE CHAIR.

The principle which ought to govern farming covenants would seem to be, that the tenant should have the freest and most unrestricted use of the lands and premises, consistent with the maintenance and yielding up of the freehold at the end of his tenancy in an unimpaired and uninjured condition.

The interests of landlord and tenant coincide in this abstract formula, but its application is interfered with in practice through various reservations by the landlord, and by the endeavour to define and limit the use of the land in such directions as may consist, not with the conditions of greatest production, but the prevention of deterioration of the soil. It would be an obvious waste of time to describe, however concisely, the various forms of agreement, with their almost illimitable number of covenants, which prevail, and control cultivation in various parts of England and Wales. Those whom I address need no description of present conditions of tenancy; but rather that, however incapably, I may indicate the relaxations and modifications, in whatever direction, which appear likely to conduce to increased production without injuriously affecting the interests of the landlord. I propose, therefore, to deal with the separate questions of rent, covenants as to cropping,

repairs, and entries between outgoing and incoming tenants. I will endeavour to condense these as much as possible.

Rent.—The payment of rent is obviously all-important. Under all forms of tenancy at rack-rent it is prudent to reserve it quarterly; and in the last year or half-year of the tenancy, to reserve the last quarter's rent in advance. This is a protection against a dishonest tenant, and need not necessarily be enforced against a good one. The payment of the tithe rent-charge and the consequent letting of farms to the tenants free of tithes has some advantages, inasmuch as the landlord is protected from the contingency of loss by the failure of the tenant to pay the current tithes on his occupation. Where farms are let tithe-free, care must be taken to deduct the tithe rent-charge in arriving at the assessment of the farms for poor's rate and property tax, so long as the rental of lands is adopted as a basis of rateable value. The payment of land tax, fire insurance, quit rents, and other exceptional charges, are matters of agreement; but, as a rule, they are best payable by the landlord. How far the preferential position of the landlord over other creditors for rent due, is really beneficial to the interests of either party, is open to grave doubt; less care in the selection of tenants doubtless arises under this system, and a thrifty, hard-working tenant, is sometimes impeded in obtaining further capital by this special exception in favour of the landlord. One ill consequence is clear—a failing tenant is allowed by the landlord to remain longer on a farm, to its probable deterioration, than if all parties stood on an equal footing.

Covenants as to Management.—These vary so completely in almost every district of England and Wales, that my remarks must necessarily be confined to the broad principles which should influence their application.

Where leases, for terms beyond 12 years, are granted to

tenants of undoubted character and capital, I venture to think that no covenants as to cropping are necessary until the last four years of the term. It is a matter of experience that excessive continuous cropping, without the assistance of large quantities of artificial manure, or the fattening of cattle and sheep on extraneous food, is unprofitable to the occupier; hence, with a moderately long interest, a tenant may be reasonably trusted to pursue such a course of management as not to unduly impoverish his land for occupation in the last four years of his tenancy. During this period of free action, some limitations, dependent on the character of the soil and its locality, may be insisted on for the consuming proportions (to be governed by circumstances) of the hay, straw, fodder, root, and other green crops, on the demise. Assuming these conditions, the management of the last four years should be simple, yet stringent in the extreme. The cropping should be limited to two-fifths, half, or two-thirds of the arable land to corn, as the case may be, with moderate proportions of pulse to be harvested. The green and root crops should be consumed on the premises, except under special conditions, and an entry and quittal, on convenient and equitable terms, should be clearly defined. The land should be given up clean and in good order; and, herein lies the key of the position if the liberal policy I have indicated, is carried out:—The covenants of the last four years of the term should be stringently enforced, and compensation for breach of these, or the terms of quittal, or of proper and thoroughly cleanly management of the land (not according to custom of country, but according to the best rules of husbandry) should be distinctly insisted upon.

In some of the best-farmed districts of England, these conditions are recognized by landlord and tenant, whilst in other localities, it is the exception for a farm to be given up in proper condition; and, in these latter cases, if the condi-

tion and management form the subject of arbitration, the whole matter is too frequently adjusted on terms which are lenient and highly favourable to the outgoing tenant.

At an institution of great importance and consideration, "The Farmers' Club," a Paper has recently been read by Mr. MASFEN on "Farm Agreements," which, highly valuable and suggestive in itself, has elicited more valuable conclusions in the resulting discussions. I earnestly commend a perusal of this Paper, and discussion to the Members of the Institution of Surveyors. The lecturer refers to, and discusses with much acumen, the farm agreement of Mr. CADLE, for which the Royal Agricultural Society's prize was given in 1868, and the valuable opinions of my friend Mr. RANDALL, of Chadbury, on the same subject, elicited by a discussion at the Midland Farmers' Club. Mr. RANDALL has the courage to suggest a new principle for the adjustment of entries between outgoing and incoming tenants, which, like all suggestions from him, deserves the highest consideration. His view is, that no land should be given up to an incoming tenant in a condition of uncleanness, which would cost more than £2 10*s.* per acre to properly clean. If, in the opinions of the valuers, the cost would be less, the outgoing tenant would be entitled to receive the difference from the incomer; if more, the incoming tenant would be credited with such difference. I am hardly prepared to adopt a datum of £2 10*s.* per acre, or any larger or less sum, dependent on soil and locality, or to recognize that a tenant should be paid a premium for giving up lands in simply good condition, and thus fulfilling his covenants; but I fully concur in enforcing the severest penalties on the outgoing tenant, whose covenants, whether in the direction of clean farming, cropping, or general dilapidations, have been broken.

The application of this sterner discipline would greatly

conduce to improved farming and increased production over an immense area of England and Wales. It is with some hesitation that I include in this Paper an outline of the cropping which is adopted on the various soils of England and Wales, inasmuch as the variety of soils and climate produce important and infinitesimal modifications of each course, which are yet further affected by the proportions of arable, pasture, and meadow land on each farm.

On very light soils, a five-field course prevails—namely, $\frac{2}{5}$ corn, $\frac{1}{5}$ roots or green crops, $\frac{2}{5}$ clover and rye grass; and where the old ley is broken up, a portion is sowed to rape or turnips before wheat. No pulse crop to be harvested in this course.

It is usually within the discretion of the farmer in what order the two-fifth corn crops shall follow.

On lands possessing more staple and of greater depth, the four-field course is almost universally adopted—viz., $\frac{1}{2}$ corn, $\frac{1}{4}$ roots, and $\frac{1}{4}$ clover and pulse; the proportion of pulse which may be permissible, fluctuates according to the quality of the land, from $\frac{1}{8}$ to $\frac{1}{12}$. In this case also, the sequence of corn and green crops should be at the option of the tenant.

The three-field course, with its modifications converting it in some cases to the six-field shift, applies to the rich, deep, strong soils which, alas! are exceptional over the broad area of England.

Its ordinary formula would be $\frac{2}{3}$ corn, $\frac{1}{3}$ clover, $\frac{1}{9}$ roots or fallow, $\frac{1}{9}$ pulse. It will be obvious that these forms of cropping are merely the skeletons of management, which permit endless modifications of catch crops, between corn and roots. With the views previously propounded, it is clear I have only introduced the preceding paragraph to be some guide to the farming of the last four years of a reasonably long term. It is now to be considered how far this elasticity in cropping, which I have ventured to suggest, where long

leases are to be granted, may be extended to tenancies determinable by 6, 12, or 24 months' notice. In discussing these conditions, I must dismiss, with much regret, the actively operative but apparently sentimental consideration of "good feeling and good understanding" which, however commercially unreliable and unsound, has over very many large estates in this country co-existed with excellent farming and large and expensive improvements. It is obvious that, under a yearly or two-yearly tenancy, it would be a most unwise liberality which would concede perfect freedom of cropping or application of all produce to the tenant. In these cases any relaxation of the ordinary covenants as to cropping, or sale of produce ordinarily consumed on the farm, must be coupled with special stipulations as to return of manures or extraneous food to be consumed by the stock. A system of tenant right, however valuable for the protection of the occupier under these contingently short tenancies, leaves the landlord's interest dangerously exposed, if any general concession as to cropping, without limitation or stipulations, is made; hence, the landlord or agent of an estate where short tenancies exist, must exercise a continuous surveillance of the property, if the remotest departure from rule of thumb cropping and covenants is to be permitted. On the other hand, I do think that the cultivation and production of farms under these shorter tenancies, may be greatly improved by the concession of a tenant right for oil-cake and artifical manures, applied to green crops within a reasonable period of the termination of a tenancy. I do not suggest the details of such tenant right; but the experiences of Lincolnshire and other counties would be a valuable and reliable foundation for the extension of the practice over our country.

But, as I conclude this portion of my subject, before me rises the recollection of various localities in England and

Wales to which the most sanguine of improvers would scarcely apply the liberally elastic conditions I have suggested. The thin, poor, wet clays, often of considerable elevation, in the damp climates of a line of country extending from Cornwall, through Wales to Lancashire, Westmoreland, and Cumberland; the weak, hot, burning gravels, and the occasional incompressible sands, where situated in an inhospitable and unattractive district, command, unfortunately, no class of tenants to whom these liberties may be safely granted.

New capital will not be drawn to these places. I say "new capital," because it happens often enough that, through long years of thrift, tenants are found on these farms who have money; but they progress not by producing, but by saving.

The average tenant of these districts lives from hand to mouth, and could not, if he would, supply the conditions which alone justify the relaxation of his ordinary management.

It has been suggested to me, that the further growth of wealth may and will beneficially affect these neglected districts, as it has others, heretofore, seemingly as desolate. I venture, if not to ignore, at least to depreciate this influence in these special cases. The competition will be keener for what is desirable, but will very remotely affect the areas which I have described in such gloomy colours. An advance of the cost of manual labour, and a permanently lower range of corn prices, may and ought to modify the character of produce of these farms. In these cases every aid should be given by the landlord and agent to develope such changes; in these directions it may be possible to concede greater freedom of management.

Covenants as to keeping stock.—The ordinary covenants for the keeping a defined number of sheep or cattle on a

farm, should obviously be as elastic as the covenants for cropping which I have indicated in the foregoing remarks. With equal stringency, the maintenance of a full proportion of live stock must be enforced during the last four years.

The management of dairy farms can scarcely be affected by any of the foregoing considerations, except that a reasonable tenant right should be given to the occupier of strictly grass farms for oilcake or other artificial food which he may have consumed during the last two years of his tenancy. Further, the consumption of oilcake or other kindred food, during any period of his tenancy, should justify the sale of a certain quantity of hay.

Repairs.—Repairs are a large and important feature in farm agreements, and probably lead to more questions, troublesome of solution, between the landlord and tenant, than any other condition of tenure. The ordinary arrangements are—

1st. Where all repairs are borne by the landlord.
2nd. Where all are borne by the tenant.
3rd. Where the landlord provides the materials and the tenant pays the labour.
4th. Where the landlord finds the materials and shares with the tenant the cost of labour.

It is obvious that these varied conditions proportionably affect the rent which is payable, and, theoretically, it would seem to be of little importance by whom the necessary reparation is made; practically, however, it is far otherwise. Left to themselves, and without any liability to make good the wear and tear which inevitably happens to farm buildings, the tenant is too frequently careless of the cost of these repairs, and permits waste and injury to his premises, which, had he an interest in their economical maintenance, would never arise. On the other hand, where the entire onus of repair is thrown on the tenant, he is too

much disposed to evade, as far as possible, his liability; hence things go undone which, trifling in themselves at the outset, by the end of a long occupation, assume very serious proportions. Arbitrations or legal proceedings are frequently necessary for their settlement, and it is exceptional if, in such cases, the tenant is not relieved of a portion of the liability which, directly or indirectly, should properly fall upon him.

For myself, I am inclined to the belief, that the fourth adjustment of the liability, *i.e.*, the division of the cost of labour by the landlord and tenant, most fairly meets the difficulties of the case.

The tenant's proportion of expenditure is limited to an amount which is more than balanced by the comfort and advantage of the maintenance, in proper condition, of his premises; and to avoid the large liability which is certain to result from neglect of prompt repairs, he will certainly be continually pressing on his landlord or agent the necessity for keeping things in good order.

Let me suggest, as exceptions to the materials to be provided by the landlord, straw for thatching, and glass and leadwork; further, the tenant should be bound to do the carriage of materials for repairs within reasonable distance. As with land, so with buildings, dilapidations at the termination of a tenancy should be more strictly enforced than is now the usual custom; but it is clear that the tenant should be only liable for a legitimate and necessary reparation, and not for restoration or reinstatement.

Entries.—The periods and conditions of entry on farms, and the power to hold over certain portion of the premises after the expiration of the term, by the outgoing tenant, and the right of pre-entry to prepare for turnips and wheat, by the incoming tenant, are singularly varied over England and Wales. It would be a waste of your time to describe

them in detail; but I rejoice that the energy of some Members of this Institution has led to the collection of information upon these points from the body generally, which, when collated and digested, will be as valuable as interesting. It is, however, within the province of this Institution, to direct their efforts to a modification of some of the tedious, inconvenient, and expensive conditions by which many entries are now hampered. As an extreme instance of tediousness, I may mention, that in some of the west country Lady-day entries, it is *fifteen* months after the expiration of a tenancy before the incoming tenant has entire possession of the occupation. I need not again enlarge on the costly character of the Surrey, Sussex, and Kent entries, which really uselessly absorb no inconsiderable portion of a tenant's capital.

Where it is possible, there can be no doubt of the wise policy of the purchase, by the landlord, of a large proportion of the items of these expensive entries, and thus reducing the cost of entry and securing the application of the tenant's capital in more profitable directions. It is obvious that tenants will usually pay at least 5 per cent. in the shape of rent on the capital thus economized; from a variety of causes, it happens that few landlords are disposed to deal broadly with the purchase of these rights. It is, however, for our consideration whether, in granting long leases, it may not be desirable to make some effort to extinguish a portion, if not the whole, of these outrageous conditions.

It is clear, that the best entry is that which permits the incoming tenant to set himself down in his occupation at the least possible expenditure of capital, without prejudice to the interests of the outgoing tenant.

The Wiltshire Michaelmas entries, for instance, appear to involve these conditions: the incoming tenant has a pre-entry given him for turnips and wheat of defined date and area, which he tills at his own discretion, without charge for

rent, rates, or taxes. Even in these cases, however, a question of tenant right crops up. Where the land on which a crop of turnips has been consumed is given up to an incoming tenant, as an entry for his wheat crop, custom has, during the last few years, established the payment of half the value of the tillages and artificial manure of such preceding crop to be paid by the incoming tenant. It is a matter of regret that the value of oilcake, or other artificial food, does not, without special agreement, come into the same category; but I am sanguine that custom, in this direction, is being quietly but certainly established.

Game.—It is with some hesitation that I introduce this topic; but the reservation is so usual and important a feature in the ordinary agricultural lease and agreement, that it may not properly be left unnoticed. The political and moral aspect of this question is scarcely within the province of our Institution. Apart from this, I regard the preservation of game, and the rights of sporting, as a simple matter of agreement between the landlord and tenant. It is, however, to be regretted, that the preservation of ground game and rabbits is occasionally carried to such an extent, as to be utterly inconsistent with good cultivation, and too frequently productive of misunderstanding and quarrels between landlord and tenant.

I may now shortly summarize the results which I venture to anticipate from the adoption of more liberal covenants.

Chief amongst them, I am assured of great general increased production of all farm produce, from the conviction that, with perfect liberty of action, a farmer will only sow his land when it is in the fittest and ripest condition for perfecting a crop; the conditions incident to such fitness involving the growth of large proportions of green crop, and the consequent maintenance of a great stock of sheep or cattle.

2ndly. The probability of more permanent occupations of farms by the same tenants. Once free to manage his lands in the fashion which he thinks most profitable, the tenant will be most unwilling to be reduced to the four corners of his cropping covenants, in the last years of his term. He will make every effort to remain on his occupation by the payment of the extremest rent, consistent with his getting a living, before the strict covenants as to cropping in the last years of his term would come into operation. I believe that the adoption of these suggestions would necessitate great care in the selection of men of capital and experience as tenants; but I am sanguine enough to believe that it would tend, not only to the benefit of the state, but to the increased income of the landlord, and certainly to the comfort and prosperity of the occupier.

Mr. T. S. Woolley (Member) in proposing a vote of thanks to Mr. Squarey for his excellent Paper, expressed his pleasure that this important subject had fallen into such able hands. He was sure, however, that Mr. Squarey would be the first to admit that he had by no means exhausted this subject, which would no doubt lead to a long and interesting discussion. One point in the Paper which he thought objectionable, was the proposed variation between the conditions of a lease during the early years of the term and towards its end. He for one, had great doubts with respect to the practical working of such a plan, for it must be borne in mind that tenants might die or become bankrupt during any portion of their term. In point of fact this often occurred, and as the final covenants could not then be enforced, there was danger in letting the terms, at any period of the tenancy, be too loose. They ought always, in his opinion, to be made fairly stringent both in the middle of the term and at the end of it.

Mr. H. Crawter (Member) in seconding the vote of thanks to Mr. Squarey, said, with reference to the question before the Meeting, that tenants no doubt would sometimes fail, and he had known more than one instance in which the owner was not only seriously affected for the time being, but the value of the property was greatly deteriorated through the laches of the tenant. Where tenants could be secured with capital, practical skill, and above all, with honesty of purpose, he found that they concerned themselves very little about the covenants of the lease, but carried out everything in a satisfactory manner during the whole tenancy.

Mr. C. F. Humbert (Member) expressed the gratification with which he had listened to Mr. Squarey's exposition of the general principles which should govern farming covenants, and he thought, as a proper sequel to it, that forms of leases applicable to different localities and different descriptions of land might be prepared by the Members and laid before the Institution. He should he happy to submit one to the Meeting, applicable to his own neighbourhood, taking for his subject a light turnip land farm with Michaelmas entry and within reach of the London markets. A series of such forms would, he thought, be very useful.

The Chairman said that many gentlemen who had replied to the questions on agricultural customs sent out by the Council, had supplied valuable information as to the customs of leasing in different districts, with copies of the forms of lease which they adopted in practice. It was hoped to make this information available in some way to the profession, but the returns were still very incomplete, and if Mr. Humbert would aid in completing the information he would render great service to the Institution. No doubt one of the most important points for discussion was that of

the terms of entry. In some places—especially in the south of England—these terms were very onerous, in others very easy, a middle course was probably the most desirable; at any rate, they should be such as to leave the capital of the tenant most free for employment on the land. Different covenants were necessary for different districts, and even for different individuals in the same district; so that a pattern lease would be inapplicable to the whole country.

Mr. C. M. Bidwell (Member) having been called upon by the Chairman, said he was not prepared, without notice, to say much. He was glad, however, to find that Mr. Squarey recommended the Michaelmas entry, which seemed to him to be the proper one, and in his own district that period was being gradually adopted. He agreed with Mr. Squarey that it was wise to allow a good tenant to farm as much as possible in his own way; but the lease should be prepared with all proper covenants, so that should a difficulty arise, there would be something to fall back upon, to prevent the farm from becoming depreciated and a possible loss to the landlord of half a year's rent, in consequence of the bad state in which the outgoing tenant might leave the land. Some men require no leases, while others must be looked after strictly; but, on the whole, he thought the safest plan was to prepare leases, in all cases, with a proper statement of covenants, and not to be too stringent with their observance until the last four years. In the best cultivated districts of Cambridgeshire, they farmed on the five-course shift and grew barley after wheat, by which they got the best quality of crop, though not in the greatest abundance. On the strong lands, they farmed on the six-course shift with a fallow once in six years. That, he believed, to be the most profitable system on strong, productive land. For the turnip lands of the west of Norfolk, the four-course

shift was the best; he was of opinion that as much discretion in the cultivation of land as possible, should be left to a good tenant.

Mr. W. J. Beadel (Member) said it appeared to him that they had drifted into the question of lease or no lease. That had no relation to the Paper, which dealt with the form of covenants, to insure the proper occupation of land for the advantage of both landlord and tenant. Some of his friends thought leases were the best; others were of opinion that tenants do not care about them, and that they are most undesirable altogether. He thought the question was—what are the conditions under which tenants can best cultivate land to their own profit, and maintain the annual value of the landlord's property? The state of things was the best in which that result was achieved—whether on the four, five, or six-course shift; and, under such circumstances the tenant ought not to be interfered with. The character of the shift must depend upon the intelligence, enterprise, and capital of the tenant; for a man, so endowed, will get a living on a farm where his predecessors for two or three generations have starved; and by the application of capital and the exercise of judgment, will convert naturally bad into moderately good land, and secure a fair profit. The Paper was one of great importance to surveyors, who should, as such, be as well acquainted with the management of land as of house property, and competent to advise their clients as to the covenants of a lease or farm agreement for the due protection of both landlord and tenant. With regard to tithe, his experience showed him that all land, for purposes of valuation, should be considered as tithe-free; because, owing to the attention or indifference, as the case may be, of tithe-owners at the time of commutation, one parish may be subject to a tithe of 3*s.* per

acre, and another of 7*s.* per acre, the land itself being of similar value in both cases. The only way, therefore, was to take the land as tithe-free and deduct the tithe from the rent. Tithe is peculiar in this respect, that it is recoverable by the tithe-owner from the land; and, if there is not sufficient value for distraint, he can occupy it until he has paid himself the tithe and the expenses of occupation. That being so, the landlord is the person really responsible for the tithe. Farms, therefore, should be let as tithe-free, the landlord taking the responsibility of tithe, for he can recover his rent by the simple but powerful process of distress. With regard to insurance, he admitted that the interest of the landlord in the buildings upon a farm was greater than that of the tenant; but he was not prepared to agree that the insurance should be thrown upon the landlord; for where the tenants of an estate were numerous, it was only a small sum for them to pay individually, but it was a large amount in the aggregate for the landlord to pay. The landlord having the major interest, ought perhaps to contribute the larger portion to the insurance; but there was a good deal to be said on both sides of the question. In discussing the question of farming covenants and the stringency with which they should be enforced during the last four years of the term, it was of course assumed that leases were granted; but suppose there were no leases! In that case there could be no such assumed period as the last four years, and, even in cases where leases were granted and every stipulation of the kind was made, he had met with many instances in which these four years had come long before they were expected. A farmer's disposition towards his landlord may have changed since the lease was first granted, or he may become bankrupt, or compound, or die;

and his executors may say, "We are under no covenant." What was then to be done? The landlord's interest must not be jeopardized by a system so manifestly insecure. Some people argued, looking to the value of the capital put upon the land, that the tenant was the most important person on the estate. But it must be remembered that the capital invested in that land was (say) from £30 to £60 per acre on the part of the landlord, and but £5 to £10 on the part of the tenant. Thus the landlord's was the major interest and ought to be first considered; but due allowance must at the same time be made, in dealing with the interest of the tenant, for the fluctuations to which the value of his capital is subject, owing to variations of climate and many other circumstances by which the value of the land itself is not affected. It was desirable, therefore, to frame agreements so as to give the greatest liberty to the tenant consistent with the welfare of the landlord. No covenants could be devised to make a bad farmer a good one; but if the tenant was a good one, encourage him and help him as far as possible; if he was a bad one, get rid of him without delay. He did not agree with Mr. Randall in his opinion, as quoted by Mr. Squarey, of allowing £2 10*s.* per acre for the recovery of land left in a foul state by an outgoing tenant; for he had never met with an instance in which the land could be properly cleansed at so small a cost. Mr. Squarey alluded to a custom under which tenants were fifteen months before they got whole possession of farms after the occupation commenced, and he could fully bear out that statement. It was most desirable that a tenant should take possession of the land at the time it was most free from everything; and Michaelmas seemed to him, in that respect, to be the fittest period of entry. The harvest was over, and turnips and mangold were coming to perfection, and could be taken at

valuation. Thus, at Michaelmas, the interest of the tenant virtually ceased, and it was then that the incoming tenant should enter. There should be a reservation in farming covenants, that the outgoing tenant should have the opportunity of threshing his corn and realizing that which he could not do between harvest and Michaelmas, or the 12th October. Circumstances had obviated the necessity for any great length of time for that purpose. By means of steam power, a man could realize in the month of September the whole of his produce, and was no longer dependent upon the manual labour of his people to thresh it in the barn. As regarded, therefore, the southern districts of the country, he agreed with Mr. Bidwell that Michaelmas tenure was the most desirable. In other parts there was a difficulty in this respect. In Lincolnshire, Lady-day tenure was the general custom, and in that county he had personal experience of a farm of 800 acres, one portion of which was held from 6th April, another from 15th May, and the remainder from 29th September in each year. There could be no doubt, in the case of these mixed occupations, the people tumbled into the farms as circumstances necessitated, and in that way the tenancies became perpetuated from those various dates. The difference between bad land and good had never been sufficiently recognized up to the present time. If a farmer got 200 or 300 acres he often thought it was more to his interest to have that, however bad, than 100 acres of good land. Bad land, he believed, would be less sought after than it had been, and the rents of such land would decrease; while the rents of land, naturally productive, would increase. Just as some agricultural valuers had never made sufficient difference between good manure and bad, between good hay and bad hay, or between the man who farmed well and one whose work was worth nothing. There would now be more dis-

crimination between good and bad in these matters; the good would be put at a better price, and the bad at what it was worth. With respect to repairs, with a wealthy landlord, there was very little difficulty; but, otherwise, it was generally sought to throw some responsibility in the matter of repairs upon the tenant. Gateposts were knocked down in harvest time, buildings damaged through the carelessness of labourers, and it did not appear to him right that the landlord should be wholly responsible for such repairs as those; but it would be fair that landlord and tenant should share the responsibility. It should be the business of the landlord to provide the materials, and that of the tenant to see that they were used in a proper manner. He knew it was customary in agreements to stipulate that the landlord should provide rough timber if it could be found on the farm, and bricks, tiles, and lime within 10 miles; but he thought it the duty of the landlord to provide paint and tar as well. With regard to the unfortunate question of game, he candidly admitted he did not think tenants ought to be punished as, in many instances, they were; on the other hand, he felt that if he owned an estate and was willing to let it at a less sum than it was worth, in order to gratify his love of sporting, no one had a right to interfere. He believed, however, a higher power would move in this question before long. Nothing could justify the damage which was occasioned by ground game, and yet he must say that nothing ought to interfere with a man's legitimate enjoyment on his own estate.

Mr. E. J. Smith (Member) said that the gentlemen who last addressed them stood forward as advocates for the beginning and termination of occupation on the 29th September; and their reason for so doing was, that at that

period of the year the harvest was in, and the farm was in the most favourable condition for a fresh tenant to enter upon it; but if the harvest was not in, what then? In the north of England where part of his agencies were situated, he had seen within the last three years, corn out much later than October. What should be done then? On the other hand, harvest was sometimes over by the end of August, and this variation of seasons, he believed, was the reason why Lady-day was generally the period for the beginning and termination of tenancies in the north of England; while in the south, owing to the generally earlier harvest, the 29th of September was the period more generally adopted. He thought they would find that the change from Lady-day to the 29th September had spread gradually from the south to the north of England in the last 200 years, and the instance which Mr. Beadel adduced of a farm held upon three separate dates of occupation, helped to prove this. It was probably held, originally, on the Lady-day tenure as regarded the land; but as respected the homestead up to the 1st of May (which by the alteration of the style was now the 13th of May); and the reason for that was that Lady-day was an unsatisfactory time for changing houses. Thus the Lady-day tenure in the north of England was due mainly, it would be seen, to the character of the seasons. The seasons, however, over all England had been changed with regard to agriculture, and chiefly by two things; they were changed 150 years ago by the introduction of turnips, and again within the last half century, by the introduction of oilcake and artificial manures. Each of those hastened the time of harvest; and hence it was, that though he agreed with gentlemen who had spoken that for the south of England the 29th of September was the best time for the beginning and termination of tenancies, he could not agree

with them that it was suitable to the whole of England, for regard must be had to the circumstances of particular districts.

He did not think it was at all a sequence that because the occupier with a lease, say of twelve years, was to be under strict covenant during the ultimate four years of his term, he was therefore not under any covenant at all during the other part of his occupation. He was made bound to cultivate according to the best and accustomed husbandry of the district, and if he fell short of that, he was just as open to be called upon to make compensation as though he was tied down by certain covenants during those eight years. The object of the covenant relating to the four years was, that the incoming tenant should find the farm in a particular state of cultivation; but it was not to be thereby understood that he was to do exactly as he pleased during the first eight years of his tenancy.

He thought it would be found that the feeling of tenants on the subject of leases was, that if the tenant had a little confidence in his owner he would prefer to have terms of agreement and thus secure his twelve or sixteen years' lease. If, on the other hand, the holding was under a landowner where changes were infrequent, and the estates were managed according to a system governed by long usage, there was no desire on the part of the tenants to have anything beyond a tenancy from year to year; but he could quite understand that occupiers holding under individual owners, in whom they had not such full confidence, would prefer to have the security of tenure which a lease afforded them.

Mr. J. H. Lloyd (Associate of Council) said that no doubt it was an important question whether, upon the

whole, tenant farmers would be glad to accept leases or not. It must depend very much upon the confidence they had in the landlords. In the case of great landowners, such as the Duke of Bedford and the Duke of Devonshire, farmers were indifferent on the subject. This question of agricultural tenancy was one now agitating the public mind a good deal, and he thought that, to some extent, the system proposed for Ireland, as regarded the relation of landlord and tenant, might be applicable to England. He recollected that a landed proprietor in Cheshire (his native county) brought a Scotch agent into the district, who introduced the Scotch system of farming. The tenants considered themselves greatly outraged. The agent was denounced in the strongest terms, and was even threatened with personal violence. He (Mr. Lloyd) was professionally engaged in the matter of an ejectment for breach of covenants, which at the time he deemed stringent; but the ejectment was effected. He had lived to see, after thirty-five years, that very agent entertained at a public dinner, and presented by the tenantry with a piece of plate in acknowledgment of the services he had rendered them. With regard to covenants, he did not think that any general rule could be laid down; for, apart from the variable conditions of climate and soil, there were other conditions of habit and custom which would prevail in spite of any arrangement. What would be applicable to a dairy farm in the southern or midland counties would be wholly inapplicable in such a county as Northumberland; and the same remark applied to the question of the proper period of entry upon occupation. He entirely agreed with Mr. Squarey that good tenants ought not to be treated with undue stringency; for he was quite sure that freedom of action in farming was as desirable as it was in other branches

of industry, and that the less it was trammelled by restrictions the better.

The CHAIRMAN observed that the subject was one of such great and varied interest that it was clear the discussion must be carried over to another evening. He would now only say with regard to leases, that when first engaged in selling large estates, he remembered that when land was let for a term of years that fact was regarded as an element of value; but now the reverse was the case, as he found that land in possession, or let for short terms only, would command the highest price, other things of course being equal. The great difficulty in adopting Mr. SQUAREY's suggestion was, as had been stated, that before the last four years of his term had arrived, the tenant might lose his capital, or be obliged to compound with his creditors. In his own practice, he had never restricted tenants beyond covenanting for a certain proportion of corn crop, providing that there should be a certain proportion of land ready for wheat, and fixing that a certain full quantity of good animal manure should be annually put on the land; and if from some accident the farm went into other hands, any liabilities on the part of the outgoing tenant, were charged against the valuation to the incoming one. He always recommended the letting of farms tithe-free, as the landlord then escaped all liability in the event of the tenant running away without paying the tithes. He hoped to see before long some alterations in the law with regard to tithe, and some arrangement carried out for making it a fixed charge instead of a fluctuating one as it now is; for it was curious to observe how very trifling was the variation on the average of years since the Tithe Commutation Act passed. The most convenient time of entry was undoubtedly when the tenant going out had reaped the produce of the year;

but this period would vary in different localties. For instance, in Herefordshire, where a large portion of the produce was fruit, good cider could not be made, and the produce realized, till quite late in the year. He thought the cost of repairs should fall upon the landlord, giving the tenant only such an interest as would induce him to look after the mechanics employed. For any injury resulting from game, the tenant should, in his opinion, receive compensation.

The further discussion of the Paper was adjourned until the next Meeting.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, March 7th, 1870.

JOHN OAKLEY, MEMBER, IN THE CHAIR.

The discussion on Mr. E. P. Squarey's Paper was resumed by

Mr. William Rex (Associate), who said, it appeared to him that one principle governed the argument of Mr. Squarey's Paper throughout, viz.:—that the course of management most beneficial to the land and the landlord, is likely to be so opposed to the interest of the tenant as to render it most objectionable to him. On no other hypothesis could he understand the conclusions drawn in page 162. He (Mr. Rex) could only conceive that a system of management was profitable to the tenant for eight or ten years, which promoted the fertility of the soil; and he did not see how the permission to pursue the same system to the end of the term could be injurious to his landlord; or why there should be much difference between the covenants of a lease and those of an agreement for a short term. The best system of farming ought to be secured in both cases. Not only, however, did the landlord require protection, but many tenants, being bad farmers, required to be protected against themselves, and

this was equally necessary throughout the tenancy—whether annual or for a term. Farmers have a great tendency to act on the proverb that "a bird in the hand is worth two in the bush," and, whenever the land has got into good heart, there is a disposition to snatch an extra crop of corn; or, when fodder is exceptionally dear, to reduce the stock and sell all that can be spared, at the expense of future profits. A strict rotation of crops, during the last four years, would not compensate for the loss of manure, occasioned by fodder going off the estate, or make up for the previous exhaustion of the land. He believed the best form of agreement was one which allowed full play to the abilities of a good farmer, whilst deterring a bad one from injuring the land. Instead of laying down a strict system of cropping, he thought it more advisable, on light land, for the tenant simply to covenant—"that he will not take two white straw crops in immediate succession;" or, on very good land, say—"not take more than two white straw crops;" and, as an intermediate restriction, say—"and not more than three such white crops in five years." Such a covenant would give the tenant great liberty in his rotation of crops, but would prevent over-cropping. He would be compelled to have two green or fallow crops in every course; but could use his discretion in having one seeds and one roots, or both roots, or in sowing his wheat after the one or the other, or after both. It would also allow him to let artificial grasses stand for two or more years. In the north of England, light lands are almost invariably farmed on the four-course system. In the five-shift system, which Mr. Squarey says so generally prevails on light lands, there must be a second years' clover ley. He (Mr. Rex) thought there was nothing which tended so much to the foulness of the land as these old leys.

Resting the land for the extra year, by no means compensated for the uncleanness caused thereby.

Looking at the very high price and increasing demand for meat, he was convinced it was most desirable that the growth of cattle food and the keeping of stock should be as far as possible encouraged; but with regard to covenants for keeping a defined number of sheep or cattle, a hard and fast line was hardly practicable. A covenant to keep any defined number may lead to overstocking, and the overstocking of pastures, whether of natural or artificial grasses, is a most injurious practice. In common with most of his north country brethren, he had been much surprised at the general practice in the south, of putting stock into meadows the moment the hay is removed. In the case of artificial grasses it prevents the formation of roots, which in the process of decay form nutriment for the succeeding crop. This was now so well recognized, that in the East Riding of Yorkshire it has of late years become the custom to spread the farm yard manure, in a moderately green state, over the sheep pastures in the hot months of July and August; this so nourishes the roots of the clover plants, that, as a rule, a better crop of wheat can be grown than if the dung were reserved, and put on immediately before ploughing up the ground for wheat.

A covenant for the growth of a certain breadth of green crops, would, in his opinion, be preferable to a covenant for keeping a certain number of sheep and cattle. If the former were secured, the latter, at the present prices of beef and mutton, would most certainly follow. A farm might be filled with lean stock without adding to its fertility; half the number of fatting stock would enrich it to a much greater extent.

It had been said by Mr. E. J. Smith that a revolution

in seasons was caused 150 years ago by the introduction of turnips. He (Mr. Rex) feared that a considerable portion of the south of England was hardly revolutionized yet; for, although no farmer on light land altogether discards turnips, yet many are grown only as catch crops, and are more suitable for Covent Garden Market than for cattle food.

On a vast number of light land farms that will not bear the roots being drawn from the land for consumption in the yards, it was difficult to get the straw converted into manure of good quality, and on such farms it would be specially desirable to allow a tenant-right in oilcake, even a liberal one, say half of the last year's consumption; but this should only be allowed provided it does not exceed by more than 20 per cent., the average consumption of the two previous years.

It was the custom, a few years ago, for the large wold farmers of Yorkshire, who have very little grass land attached to their farms, to buy in a great quantity of cattle after harvest and keep them in the straw yards during winter to tread the straw into manure, selling them out in the spring at the same, or even less money than they cost to buy in. Oilcake has, to some extent, altered this.

With regard to selling off hay, straw, roots, &c., he believed it had been conclusively shown, that if *all* the produce is properly consumed on the farm and the products returned to the soil, it must of necessity become richer; and, on the other hand, it could not be gainsaid that the most effectual way of reducing the productive power of a farm, was to sell off fodder crops without returning an equivalent in manure, and therefore the liberty to sell must be more strictly guarded. But as towns must be supplied with produce of this kind, farmers in the immediate neighbourhood should be allowed to sell, on bringing back a full equivalent in

manure, which they would be likely to do; but carriage is so expensive that those at a distance would not do so. As to leases, the question for consideration is not so much whether tenants, as a rule, are desirous of taking leases, as whether it is a good thing that they should have them. In his experience there was a generally growing desire for leases, and he thought it was admitted that the high farming of Scotland was chiefly attributable to the boldness and sense of security, induced by the nineteen years' leases which are there so general.

As to the time of entering and leaving a farm, if it be taken as a rule that it should be when the land is most free from crops, and when "the incoming tenant can set himself down in his occupation at the least possible expenditure of capital, without prejudice to the interests of the outgoing tenant," then, in the north of England, Lady-day is the best time. There is nothing on the ground but the wheat crop and the young clover, or other artificial grass seeds. The former is usually the offgoing crop of the vacating tenant, which the incomer takes at a valuation made a few days before the next harvest, when the crop is just ready for the scythe. The seeds are taken simply at the price of seed and sowing. The tenant has not to pay down a large sum as in Surrey or Kent; he comes into possession of his land by degrees, having the right of pre-entry to plough and prepare for his portion of cereals and break up the land for his green crops. It is usual for the neighbours, for miles round, to send one or two plough teams for a day. A man of good standing will thus, in going into a large farm, have 100 or 200 acres ploughed free of expense.

There are many advantages in allowing an offgoing crop, not the least of which is that it induces the tenant to farm well to the last, and the landlord, having the option

of taking the crop at a valuation, can secure his rent where there is any doubt, and each tenant has the benefit of every crop he has put into the ground.

Another advantage is, that in case of the sudden death of a tenant, there is generally something for his widow and children, whereas in the counties of Surrey and Kent, it might happen that a tenant had paid a large sum for tenant rights on going in, but if, through death or other cause, the farm had to be given up unexpectedly, he might not be able to get one-third as much on leaving; for it must be borne in mind that the enormous valuations in those counties are frequently the result of a great deal of forethought, and require so much skill in their arrangement, that it is not a very unusual thing for a farmer, who is not well up in the matter, to call in his valuer twelve months or more before the end of his term, to advise him as to the best course of cropping and management, so as to get the fullest valuation the custom of the county or district will allow.

A further advantage is, that the incoming tenant is relieved entirely, of any responsibility or outlay as to one-third of his arable land, and can, for the first year, concentrate the whole of his energy and capital upon laying a good foundation for future success, by producing the best possible turnip and other root crops; and he may, after stocking his seeds for the summer, by good management have some of his turnips eaten off, and plenty of fat sheep sent to market in November to pay his first half year's rent. He can thus begin to realize profit at once, whereas, in a Michaelmas entry in the southern counties before named, the incomer has not only to pay down his heavy valuation, but he has to pay his first half year's rent before he can possibly get any produce to market.

Mr. P. D. Tuckett (Member) mentioned, with regard to pre-entry and holding over, that he had recently let a farm in the north of Durham—it was a usual Durham May-day tenancy—and although the incoming tenant nominally commenced tillage on the 1st of December last, he would not have done with the outgoing tenant until the 12th of May, 1871, a period of between seventeen and eighteen months. Last week he had let a farm in Hampshire, where the incoming tenant commenced tillage on the 1st of January, and the old tenant would hold over until Lady-day or May-day 1871, for threshing and other purposes. He regretted Mr. Squarey's toleration of the Wiltshire tenant right system, and thought he should have recommended its abolition. It had been done away with in Essex, which now had the simplest of all customs; and in that county, whether the tenancy expired on the 29th of September or the 11th of October, the outgoing tenant was paid for all he had done up to the time of his quitting, and went away, retaining only the privilege of threshing his corn on the farm. These pre-entries and holdings over were relics of the time preceding the introduction of steam threshing. In these days of agricultural machinery, if they gave the right to thresh up to Lady-day, they gave all that was necessary; no pre-entry was ever needful; and with a Lady-day tenancy, there was no necessity for any holding over at all, and land agents in reletting farms, could do as he himself had done, and abolish these customs, by getting rid of the successor's pre-entry as a set off against the tenant's own holding over. It was a simple thing for the incoming tenant to take the fallows, and root crops at a valuation; and the bickerings that were certain to result from having two tenants on the same farm, for any length of time, were thus avoided. Let the tenant be bound to do all that was required on the farm till the

tenancy ended, and if he failed to do this, he should be liable for damages.

He was convinced that Michaelmas, in the south east of England and Midland counties, was by far the best time for entry; but in some places, no doubt, a Lady-day tenancy was best, because, on account of the comparative lateness of the seasons, Michaelmas was too early to be clear of the harvest and the fruit. He hoped that one effect of this discussion would be, to induce land agents to contrive the abolition of the clauses of pre-entry and holding over; for, in these days of threshing machines and intelligent valuers, there was no necessity for the further retention of these old-fashioned processes.

It had been suggested that pattern forms of agreement, suitable for different localities, should be drawn up; but what was wanted was, a simple, skeleton form of agreement capable of general application, and which could be adapted, by inserting the special outgoing or other covenants, to any district. Such an agreement was prepared by Mr. W. Sturge nearly twenty years ago, and submitted to Mr. Lloyd for his opinion, and this, with the late Mr. Beadel's admirable cultivation covenants, was just such a form as he advocated. Much of the difficulty, with respect to covenants, had arisen from the fact that so many leases were copied from old drafts in solicitors' offices by people who had no knowledge of their meaning: the farmer often had no copy of them; and, in fact, looked on them as mere documents not intended to be read or understood; the result was the tenant right valuers were not disposed to carry out their provisions very strictly. It seemed to him that an attempt was being made by such bodies as the Central Farmers' Club and the Midland Club, to cure this state of things, not by simplifying a tenant's obligations, but by throwing an onus upon landlords

which it was useless to ask them to bear. In the form of agreement appended to the prize essay in the Journal of the Royal Agricultural Society, on "The Farming Customs and Covenants of England," by Mr. CADLE, that gentleman had suggested as many as twenty different covenants, on the part of the landlord, some of which no landlord would, he thought, be inclined to agree to. To take, for instance, the first clause of the "Landlords' Covenants," "To put the buildings in repair at the commencement of tenancy, or guarantee their being so put by outgoing tenant, such repairs to be completed within three months of time of entry." That stipulation *seemed* fair enough, but he never adopted it, for tenants were very reluctant to admit that the buildings had been fully put into repair. He could not advise clients to agree to valuations of damage done by game. If landlords chose to preserve game, it was much better to have it understood, and to put the rent proportionally low on that account.

The suggestion of Mr. RANDALL was referred to by Mr. SQUAREY, that the tenant should be paid for the cleanness of land which took less than £2 10*s.* per acre to clean it, and that he should pay for land which required more than that amount to put it into a proper state. Theoretically, the tenant was bound to leave the whole of the land clean; and if the tenant right valuers failed to enforce that, they might do the same by the new agreement, and if so, it would come to this, that a present would be made by way of tenant right, of £2 10*s.* per acre to all existing tenants.

The more simple the agricultural covenants in leases or agreements were made, the better. As to management, four things only were wanted. First, a general agreement to keep the land clean, well stocked, and in good heart; secondly, an agreement as to how the grass land was to

be mowed; thirdly, as to the selling of hay, straw, and roots; and, fourthly, as to the cropping of the arable land. These matters could be included in four short clauses, perfectly easy for every tenant to understand.

As to repairs, it seemed to him of little consequence, whether the landlord provided the rough materials and half the labour, or rough materials only; but in the former case he ought strictly to enforce the agreement, for half the labour was the least that the tenant should contribute. If he agreed for materials only, and threw the whole of the labour on the tenant, it gave him an opportunity of being liberal in little matters. It was necessary, however, to decide what rough materials were. In the present day, he believed that it was generally more convenient to supply the tenant with foreign timber instead of the ordinary rough materials.

Mr. C. Cadle (Member) agreed with Mr. Tuckett as to the extreme undesirability of having two tenants on a farm at the same time; for ill-feeling and quarrels were sure to arise. He did not, however, concur with that gentleman as to the agreement question; for though, in theory, it seemed a good thing to have a short agreement—and he had heard people boast that their agreement was drawn up on a sheet of note paper—it must be borne in mind that any agreement bars the custom of the county entirely, and could not, in his opinion, be safely compressed into the four clauses proposed by Mr. Tuckett. Covenants, and full explanations of them, were necessary to prevent disputes, which often arose, and involved complicated questions between outgoing and incoming tenants.

If Mr. Tuckett, in quoting from his (Mr. Cadle's) agreement the clause relative to repairs, had read the note

appended thereto, he would have seen how much it simplified the matter. It was this:—"If the former tenant agreed to give up the premises in repair, it falls upon the landlord to compel the fulfilment of the agreement;" consequently, as the agreement was between the landlord and outgoing tenant, the landlord must either put them in repair himself, or compel the outgoing tenant to do so.

One speaker advocated a division of the labour of repairs, and he considered the provision a very good one; for the practice of finding rough materials often caused much dissatisfaction and distrust. The tenant should not be relieved, however, of all responsibilities with regard to them, or he would be apt to become careless about the amount of damage arising in the course of his operations.

At the last meeting, a yearly notice to quit was recommended, but this he did not agree with, as it only gave the tenant longer time to exhaust the farm; if a man took a farm on lease—say for sixteen years—he would probably strive, during the first twelve years, to get the land in as good a condition as possible, and then spend the other four years in undoing what he had previously done. Surely that was not a satisfactory state of things for us to recommend in this age of improvement! The way to obviate it was, to extend every possible inducement to the tenant to maintain the land in good condition to the end of his term, and this would be best achieved by dealing liberally with him, by allowing full compensation for any unexhausted benefit from artificial manures applied by him to the land, and for anything else which he could justly claim. The tenant's capital in the land is often three times greater than the actual compensation he receives, hence his anxiety to get all he can when leaving, and he therefore proposed a more liberal allowance for the last years of the lease than

was generally given, to induce the outgoing tenant to farm well till he leaves: the same may be said of the employment of artificial foods. This arrangement would be advantageous to the outgoing tenant, for he would be paid without running the land out; it would be to the interest of the landlord, for his farm would be in good condition to let to a fresh tenant; and it would benefit the incoming tenant, inasmuch as he would be spared a large outlay of time in restoring the land to good condition. He, therefore, recommended good and liberal compensation as conducive to the advantage of all concerned.

The best time of entry was a question which had been a good deal discussed, not only here, but in many other places; he confessed it was a difficult question. Some people recommend Michaelmas, and others Lady-day entry; but, in the west of England, Michaelmas was out of the question, owing to the fruit. For arable land, perhaps, Lady-day was the best; but he questioned whether Christmas was not preferable for grass land; with a Lady-day tenancy he would not allow the tenant to graze the land after Christmas. With respect to arable land, Michaelmas takings were objectionable, because the outgoing tenant had been doing his tillage during the summer and there was often little to show for it. He had heard of twenty-five or twenty-six cultivations on the same field, and in such cases the valuer could only take the outgoing tenant's word—a very unsatisfactory state of things. On the other hand, with Lady-day entry, (unless the outgoing tenant was compelled to plant the wheat and other crops, and prepare for the following season,) the incoming tenant was rather late to begin his work.

It had been stated that a man might pay ever so much for tenant right on going in, but might have no wheat crop

that year, owing to the foulness of the land. The object, therefore, should be to frame agreements, so that it should be to the interest of the outgoing tenant to leave the land in a clean condition, and induce him to raise good crops by allowing for the manure; for nothing kept land so clean as a good crop of turnips or a laid crop of corn.

Mr. W. Eve (Member) was struck with the fact that no allusion had been made to the subject of drainage, a matter on which he thought the tenant should be very liberally met, and encouraged to the utmost. With respect to tithes, he was at a loss to conceive the advantage to be gained by throwing the liability on the landlord. Farms let tithe-free were, he thought, cheaper than those let subject to tithe (this, of course, he admitted was a fallacy,) inasmuch as some tenants looked upon tithe simply in the light of a rate, but as a rule persons did not take it into sufficient consideration. He could not see why the landlord should pay the tithe; and the only reason assigned for the proposition was that, strictly speaking, the landlord was liable, and in the event of the tenant not paying it, the farm might be occupied by the tithe owner; but surely the outgoing tenant's valuation would be sufficient to meet any circumstance of that sort.

Then came the question of insurance. Some persons said it ought to be paid by the tenant; but he could see no reason for that. If the landlord paid it, he had the satisfaction of knowing it was done; but when it rested with the occupier, from inadvertency or some other cause, the premium might not be paid up, and where neither the landlord nor the agent resided in the neighbourhood, the premises might frequently go uninsured. The insurance for the maintenance, in a useful condition, of the farm-buildings

—being the materials for which the rent is paid—should, he thought, devolve upon the person who received the rent for them.

With regard to time of entry, for the south of England and the Midland counties, there could be no two opinions that Michaelmas was the best period. There was one reason not alluded to, which was not an unimportant one, viz., that whatever the outgoing tenant did prior to Michaelmas —though he did it badly—was of some good. On the other hand, a Lady-day tenant might do work for which he would be paid, but do it in so careless a manner that the incoming tenant would lose more than he would do at a Michaelmas entry. The fallow would do some good; and he would not have to pay for husbandry executed in an improper manner, or for other matters of an unprofitable kind.

Mr. E. Ryde (Member), as a Surrey man, desired to say something in defence of the Surrey custom. According to one speaker, outgoing tenants were to be encouraged to do all sorts of things, the only condition being that they were to be paid for them. That went a long way beyond the Surrey custom, and he thought no Surrey valuer would ever admit a payment for twenty-six tillages in one field, as had been suggested might be the case. The Surrey custom, after all, was not quite so bad as some thought it. He would quote a passage from the earlier portion of Mr. Beadel's very excellent and practical speech, delivered on the last occasion (page 165), which was as follows :—

"A man endowed with intelligence, enterprise, and capital, will get a living on a farm where his predecessors, for two or three generations, have starved; and, by the application of capital and the exercise of judgment, will convert naturally bad into moderately good land, and secure a fair profit."

Those words were happily expressed, and were, no doubt, exceedingly true, and they should be borne in mind in considering the Surrey custom. He knew of farms in Surrey, the occupiers of which were also the owners, and so had paid for no Surrey custom; yet, notwithstanding this advantage, and without living more extravagantly than their neighbours, they had been unsuccessful; while on the other side of the hedge, farmers, who paid the Surrey valuation on going in, had been very successful and saved money. So it was not always the Surrey custom at fault. He knew a district which belonged to a so-called "liberal" owner, who bought up the valuations and charged the tenants an additional rent; but it would be found that intelligence, enterprise, and capital existed, where the valuation was taken by the tenant; while, in the cases where nothing was paid by the tenant coming in, an opposite state of things prevailed. In the latter case were found poverty, indolence, and bad farming; and, therefore, he thought experience tended to show that the Surrey custom rather stimulated to good farming; it certainly attracted capital, and required intelligence to cope with it. With the Surrey custom, moreover, the tenant had always some property in the farm, and there was no necessity to reserve the last quarter's rent in advance, as Mr. Squarey had suggested (page 152). He agreed that few landlords were disposed to deal broadly with the purchase of these tenant rights, because he disputed the assumption that the tenants would be willing to pay an extra rental of 5 per cent. on the cost of buying them up. A tenant who came into a farm in Surrey, by paying a large valuation, satisfied his neighbours that he was a man of means, and when harvest time came, and he wanted additional capital to meet the increased expenses of that period, he had no difficulty in obtaining an advance

from his bankers, sometimes with, sometimes without, the deposit of his lease. He thus obtained an advance at the rate of 5 per cent. for the time only, and would not have to pay for the whole year, as he would under the system advocated by Mr. Squarey. If the farmers of Surrey were canvassed, they would be found to entertain a most decided objection to the payment of an increased rent, equal to 5 per cent. upon capital expended in buying up these valuations. Under this custom there was a great security for the landlord; it was evidence of a man's substantiality, and did not operate so badly, after all, on good farming. Of course, rent and tithe represented the same thing. If land were tithe-free, the tenant could pay more rent for it, and he did not think it was of much consequence in which way the tithe was paid. It was said that in making valuations of land, it was better to treat it as tithe-free. This was, he believed, the universal practice, the tithe, if any, being afterwards deducted at the bottom of the valuation. Whether the tithe was paid by the tenant or not, was of no consequence in estimating the rateable value of the farm, which was what the land might be expected to let at, and if it was not charged with 3*s*. or 5*s*. an acre tithe, it would let for just that amount more. There was a misapprehension abroad, that clerical and other owners of tithe were rated excessively and improperly. It must, however, be borne in mind, that at the time of the commutation, after the average value of the produce for seven years previous to 1835 had been ascertained, the average rates were taken into account and added to the amount, so that the tithe rent charge, as now fixed, included not only what was due to the tithe owner, but the average rates and taxes he had himself to pay, and he, therefore, simply repaid what had been given him under the com-

mutation. Repairs of buildings were entirely a matter of agreement. If repairs were not to be done by the tenant, he would give so much more rent, if otherwise, he would pay so much less; but, no doubt, if the tenant had no interest in the repairs, he was likely to let the buildings get into a bad state. There was great waste, too, with regard to providing rough materials, and it often happened that, if a gate post was required, a tree was cut down to make it. Mr. Rex had advocated the Midsummer valuation; he could only say, as far as his own experience went, that if there was one kind of valuation less to be recommended than another, it was the Midsummer valuation. Of all uncertain things, the valuation of growing crops of corn was the most so. He was one of those who thought Michaelmas was the time for entry; and, with regard to Mr. Smith's objection, that the corn might not be in till much later than Michaelmas—he would say, give time enough to get it in, and any farmer would take care that it was done as soon as possible: he, therefore, saw no practical difficulty under that head.

Mr. D. Watney (Member) observed that a short agreement, which could be compressed into a single sheet of note paper, such as had been mentioned, would not specify any details, but would probably allude to the custom of the country. In outgoing valuations, custom applied where there was no agreement, and also where the agreement was silent upon the point. A good deal had been said about restrictions, over-cropping, and extra cropping; he hardly knew the meaning of the latter terms. If the tenant was a good one, the more crops he grew, the better; and the only restriction should be one to prevent him from having more than half the land in corn, and the

only compulsory clause, one binding him to have at least one-fourth of the arable land in fallow, with roots: he did not see what more was necessary. In a country district, he thought the hay, straw, and roots, should be fed on the farm—the roots certainly. A covenant to specify that the land should be *kept clean, well stocked, and in good heart*, in his opinion, meant nothing, and might as well be omitted as not. He agreed with Mr. Eve, that insurance should be undertaken by the landlord; for an agent could insure the whole of the buildings on an estate at one operation, whereas if there were five-and-twenty tenants, he had to see that each had attended to the matter separately. If any of them neglected it, the loss, in the event of a fire, would generally fall upon the landlord. In his own practice, he always provided *prepared* timber for repairs. When a tenant notified to him that repairs were needed, he asked for a specification of what was required, and of the quantity of prepared timber necessary; and having satisfied himself that it was correct, by a personal visit to the farm, he sent a supply of prepared timber for the purpose. He found it better to do this, because when rough timber was supplied, half of it was often cut to waste, and the other half misapplied. He thought the landlord should also provide bricks, tiles, and slates, leaving the tenant to find the other materials. With regard to tithes, it must be remembered that they were generally due on the 1st of October; and if the tenant was bound to pay them, the agreement should specify that he paid the tithes due on 1st October, after the expiration of his tenancy (assuming, of course, the tenancy to be a Michaelmas one), and the valuer to the incoming tenant should ascertain that this was done, before he settled the valuation. He had always thought the Surrey custom indefensible, and he was surprised that an

advocate had been found for it in Mr. Ryde. His own opinion was that it encouraged bad farming and bad tenants generally; the bad tenant received for cultivation and dressings as much as the good one, and on that principle alone, he said, it was a bad custom. Again, it was to the interest of the landowner to buy up the tenant's claim for unexhausted manures and other matters (other than for work actually done to the fallows during the last year of the tenancy), because it must be obvious, that as the land increased in value and the rents were raised, the valuation would also increase; for the rent and rates on the fallows, would, of course, be more, and half fallows, half dressings, and leys would undoubtedly be put at more money on land producing a rent of 40*s.* per acre than on land only producing 20*s.* per acre. No doubt the tenant should be encouraged to drain, and should be paid for a fair proportion on quitting. In the Midland counties where they had only yearly tenancies, the tenants drained their farms, and the custom of the country gave seven years as the time over which the drainage was to be paid for. One clause which might, with advantage, be put into an agreement was, that if a man compounded with his creditors he should forfeit his lease, in the way that forfeiture ensued if he became bankrupt. The great object should be to have good land well farmed and to have bad land farmed better, and by increased cultivation and the use of machinery, bad land could, as Mr. Beadel observed, be turned into good.

Mr. W. Brown (Member) had no criticisms to offer upon the Paper itself; but passing to the observations of Mr. Beadel, there was one point on which he did not quite agree with him. It was with reference to his remark that

executors were not bound by the covenants of the lease after the death of the lessee. He had always understood, that on the death of the lessee, those who came after him were equally bound by the covenants.

He was surprised to hear the defence of the Surrey custom which had been made that evening; for he thought everyone was trying to get rid of it as fast as possible, so that a tenant might apply his capital to the cultivation of the soil, instead of having to pay such enormous sums for tenant rights, with regard to which so much trickery was often practised. He thought the clause referring to what was called rough timber, was one of the most injudicious a man could insert in an agreement. It was no advantage to a tenant to be supplied with a tree from the land, for it frequently cost as much to cut it down as the timber was worth. Any judicious man would agree, that the fittest and most appropriate for the purpose was foreign timber, leaving the landlord to sell his ash and beech timber for other purposes. He thought that a very small proportion of the land of this kingdom was held on lease; probably not more than one-fourth. They had, therefore, to deal with the greater part as yearly tenancy, and in discussing this question that fact must be kept in view. In dealing with men of capital there was not much to fear; the difficulty was with the needy men. There was a clause in the form of agreement which he had acted upon for some time, to which he would call attention, in answer to some remarks that had been made that evening. It was as follows :—

"And it is hereby further agreed that in case the tenant shall fail, or become bankrupt, or assign his interest in the farm to trustees or other persons, then this agreement, and the tenancy hereby created, shall be at an end, and it shall be lawful for the landlord to re-enter and take possession of

all the said premises, on paying to the assignees the value of any acts of husbandry performed thereon, deducting therefrom such rent and other claims which may be due from the said tenant."

He thought that clause would always meet the case of a bankrupt tenant. He did not think that the short agreements, advocated by Mr. Tuckett, would be found sufficient. He had been frequently before law courts on matters of disputes, arising from breaches of covenant, and had been told—"the landlord had things in his own hands and could have protected himself, and if he has failed to do so he must abide by the consequences of his neglect." He submitted, therefore, that short agreements were most undesirable. His own form of agreement, from which he had just quoted, had been cut down to the shortest limits consistent with security, and yet some people would even now complain that it was too lengthy. He hoped that the Institution would be the means of promoting the amicable settlement of disputes between landlords and tenants in cases where there was no agreement. Most difficult questions were often involved, and he felt that something should be done to secure the reference of these matters to competent persons, without the necessity of going before the courts of law.

Mr. J. Black (Visitor) said he was afraid that his experience was of a character so different to that of most present, that it would be out of place for him to make any remarks; but he would state that, twelve years ago, he drew out a form of agreement for a Scotch lease, which was adopted by the owners of several large estates in Scotland, and he was delighted to find, at this date, that it agreed very much with the principles laid down by

Mr. Squarey in his Paper. Several gentlemen had spoken upon the tenant right system; and he could say, from long experience on an estate with a large rental, that he always found the best farmers were those who had not their capital locked up by the purchase of tenant rights.

The discussion was then again adjourned to the next Meeting.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, March 21st, 1870,

JOHN CLUTTON, PRESIDENT, IN THE CHAIR,

The adjourned discussion on Mr. E. P. SQUAREY's Paper was resumed by

Mr. T. HUSKINSON (Member), who said that, without any pretension to instruct others, having spent thirty years of his life in dealing with mother earth, that mind must be dull indeed which from such an experience had learned nothing.

On the question of the covenants which should govern farm agreements, he thought the object of all covenants and agreements might be stated, briefly, to be—to secure by the best means within our power the largest amount of produce from the land, not only without deterioration, but with a progressive and increasing fertility of the soil. Then the question arose, by what means could that object be best attained. It was attempted, practically, in two ways, viz., by agreements more or less complicated, and by covenants chiefly of a restrictive character, and generally of a negative kind. Although negative, he did not say they were unnecessary; but he held that they were hardly operative in securing good farming. Agreements of that kind operated upon agriculture very much like laws upon human society: they did not present any rule of life to the right-minded citizen, but they were useful in restraining and punishing offenders. That which could alone promote

progressive improvement, was a liberal tenant right and a proper allowance for unexhausted improvements. It was quite clear that restrictive clauses in an agreement, however well observed, could only produce agricultural stagnation. Such clauses might prevent things from getting worse, but they had no tendency to make them better. This was the case with the Roman system of agriculture, and with the Carthaginian and the Greek, which, while more careful and exact than ours in many respects, had this peculiarity, they proceeded on the principle that cultivation, as cultivation, was capable of doing everything, and that, by such means, successions of full crops could be raised. We know the result. The production gradually decreased, till, in Italy, at the fall of the empire, it was scarcely half the amount secured in the earlier period of its history. The same delusion was held by JETHRO TULL, who, though an eminent cultivator of the soil, believed that he could go on raising crops of corn, year after year, and still maintain the original fertility of the soil. That delusion, however, barely survived his own time, and we now acknowledge, in farming, the axiom that "from nothing, nothing can come." Corn could not be continuously grown, unless, by some means, the fertilizing elements taken away from the soil were brought back to it. Any other system must tend to produce stagnation, if not retrogression; and it became them, therefore, to consider in what way a progressive agriculture could best be promoted. He thought it could best be done by liberal tenant right and ample allowance for unexhausted improvements; and this brought him to the question—what is tenant right? It is this—that a tenant, on quitting a farm, should be allowed for everything he has expended upon it, the profit of which he had not reaped during his occupancy, but which would be reaped by his successor, from whom he had a right to receive it, whether it consisted of manure put

upon the land, labour done, or any other expenditure for the benefit of his successor. That, he took to be equitable to all parties—equitable to the man who went out and to him who came in, and a principle applicable to all tenancies, whether yearly or on lease.

This did not touch the question of lease or no lease; for the true principle of tenant right was equally applicable to leases or yearly tenancies. In the case of a lease, liberal tenant right was conducive to good farming during the whole tenancy. He was very glad to find Mr. Hope (who, as a Scotchman, would naturally hold up their leases as a pattern) expressing his opinion that liberal tenant rights were as important in leases as in tenancies from year to year. However, he would dismiss the question of lease or no lease, which is worthy of a separate discussion, and confine himself to tenant right as applicable to all tenancies.

It was well to discuss this question of tenant right as much as possible in the light of experience; therefore, in speaking upon this subject, he would refer to the county of Lincoln, and to his own county of Nottingham. In Lincolnshire, he could say from his own knowledge, that yearly tenancies mainly prevail, combined with the most liberal tenant right; and the high position of Lincolnshire as an agricultural county was mainly due to the justice, moderation, and liberality of the large landowners. The northern parts of Nottinghamshire were not much behind Lincolnshire; the tenant right was even more liberal than in Lincolnshire, and the cultivation most progressive and improved. He might say in passing, before dismissing Lincolnshire, that he had had some experience in the west of Scotland where the leasing system prevails, and he had no hesitation in saying that the average of farming in Scotland was very far inferior to that of Lincolnshire. In the Lothians, certainly, the farming was as good as in Lincoln-

shire; but Scotland, generally, and the western part particularly, does not equal Lincolnshire with its yearly tenancies and liberal tenant rights.

These allowances of tenant right had this advantage—that they were equitable, elastic, and applicable to every conceivable state of cultivation. In Lincolnshire, there was not only the tenant right allowance for manure, linseed cake, &c., but also for newly discovered improvements in farming —such as the introduction of cotton cake for food and coprolites for manure, &c. All these things, as soon as they came to be practised, generally, were incorporated into the customs, and were regarded as subjects of tenant right; a fact of no small value in promoting a progressive state of agriculture. This principle of tenant right had reference, naturally, to the time and circumstances under which a man quitted his land. It was clear if, in view of quitting, you wished a man to do things for the benefit of his successor, you must make it to his interest to do them. It was all very well to say that by covenants you make a man do these things. If you made it to his interest he would probably do them; but, if otherwise, he would very likely evade them. This system of tenant right addressed itself to a man's personal and pecuniary interest, which was one of the oldest and least variable principles of human nature. Covenants in general, though necessary, never have been, nor would be, productive of good farming, and could, in no case, make a bad farmer a good one. The qualifications for a good farmer were intelligence, capital, and energy; but those were things which could not be created by deed under hands and seals. Any agent of an estate, when he met with a person combining these excellent qualities, should do his best to give him the greatest and most liberal encouragement. But where, in place of them, they met with ignorance, idleness, and poverty, let them get rid of such a tenant as soon as they could.

Though he might appear by these remarks to disparage agreements, he still held that they were necessary, though not very effective; but, inasmuch as there must be some agreement, he thought it should be as simple as possible. It must regulate the time of quitting and entering, which must depend upon local circumstances, climate, and situation. In the south of England, Michaelmas tenancies generally obtained, and were, there, the most convenient; but north of the Trent, Lady-day tenancy prevailed, and was the best. In the midland and northern counties, Lady-day was preferred to Michaelmas. But, at whatever period the entry took place, he had no idea of double tenancy, and in his district he did not find that the Lady-day tenancy necessitated that system at all. The arrangements were made for the 25th March,—one party went out and the other came in, and the whole thing was settled in a day or two.

Of course a clause was necessary to regulate the question of rent, which should, he thought, be a *gross* rent. He agreed with Mr. Beadel, that, when land was subject to tithe or land-tax, those charges should be paid by the landlord, and not by the tenant. It might happen that a case of this kind occurred:—Landlord A let his land, subject to tithe, payable to the tithe-owner B, but through negligence, B allowed the tithe to run into arrears. The tenant had gone away—the valuation was settled, and notice came from the tithe-owner that he claimed so much tithe on a particular farm—the new tenant said, "I cannot be expected to pay these tithes; I supposed they were paid; the landlord must pay;" and it might give rise to an action-at-law to recover. He, therefore, said that the rent should be reserved in *gross*, and all the charges upon it paid by the landlord. In the case of land-tax, where it had to be paid by the tenant, it might happen that payment was made upon portions of land which were exonerated from that tax,

and the landowner might have that additional incumbrance brought upon his property.

Then another clause, as a general rule, was that all the produce of the land, except grain, should be consumed on the farm to make manure; and where circumstances required a sale of such produce, an equivalent in manure should be brought upon the farm. The restrictions as to cropping ought not to be too minute or complicated. There might be a general restriction that not more than half the farm should be in white corn; that at least one-fifth should be in fallow, and one-fifth in pulse or seeds. It was also desirable that there should be power of entry, on the part of the landlord, to do certain things before the expiration of the tenancy; as, for instance, to sow wheat if the tenant had neglected to do so. Some general restriction was also necessary with regard to grass land—that not more than half should be in meadow in any one year.

Then there was the question of repairs; different customs prevailed on this subject. He found in Lincolnshire, as a rule, that the tenant did all repairs; he would think himself lowered in self-respect if he troubled his landlord to paint his house or make trifling repairs. In other counties, a tenant would not lift his hand to put on a pantile, even though the rain came through his roof. As an abstract question, he thought the repairs should be met on both sides; and, as a rule, the material should be provided by the landlord, and the tenant should contribute the labour, which amounted, practically, to about one-half of the expense, and in that way a partnership in the matter was established. However, many small repairs were more matters of care than of cost; and if a tenant took no share of the cost upon himself, he was liable to make all sorts of demands, which, under other circumstances, he would not have done.

Having laid great stress upon tenant right, as a means

of promoting improvements in farming, he ought now to state in what he thought liberal tenant right consisted, as understood in Lincolnshire and Nottinghamshire. The first item of tenant right was, that the whole of one year's manure, made from the produce of the last year, should belong to the tenant, and be valued to the incoming tenant. In cases where the tenant was obliged to leave the last year's manure without any allowance for it, he was not likely to keep stock to make the straw into manure; it was left as mere heaps of straw, but not manure: but if the tenant had a property in the manure, it would be to his interest to make it as good as he was able.

Then came the fallow crop. He spoke now of Nottinghamshire, as being more liberal. The custom in that county was, that a year's rent and rates, and the whole of the labour and manure applied upon turnips or fallow were added, and formed a debit against the incomer. This might amount to £7 or £8 an acre. Against that, a deduction, if turnip land, of half the value of the turnip crop, leaving the residue to be paid by the incomer. The tenant was entitled, upon fallow, to be paid for all manure bought. If there were a quantity of bone manure bought, he was paid an allowance for three years; for lime, three years; and for marl or chalk, seven years; on cake bought, the allowance was half the cost of a year's consumption on an average of the last three years, or, what was often done, a quarter of the last year and a quarter of the preceding year. He believed these items, with seed and labour on corn sown, mainly constituted the tenant right which the occupier had, apart from permanent improvements.

In his own district, the old-fashioned allowance for way-going crop, still exists to a limited extent, a practice which was wholly indefensible, and which certainly could not be said to encourage improved farming. In the northern and midland counties the custom had been got rid of, to a

great extent, partly under enclosure, and in other cases by purchase by the landlord, when he had a favourable opportunity of buying it up. This practice was adopted under the old system of two crops and a fallow. The tenant quitting at Lady-day would reap the wheat sown in the previous October, and the oat or bean crop of that year.

He had reserved the question of permanent improvements, because he thought that in the management of properties, a distinction should be made between permanent improvement and that which belonged to ordinary occupation. He held that a landlord, worthy of his position, and alive to his own interests, ought to undertake all permanent improvements on his estate, whether buildings, or draining, or making roads, or whatever would contribute to the permanent improvement of the property; and he was happy to say there was no lack of instances in which this had been done with most satisfactory results both to landlord and tenant. The legislature had given powers to owners of limited estates, to borrow money for such improvements at about six per cent., repayable in twenty-five years. If the owner carried out the improvements himself, he was in a position to employ the best skill; whereas the tenant, whose whole experience might have been confined to his own farm, was not a well-qualified person to carry out draining and other permanent improvements, and even if he were, he would expect to make more of his capital than would satisfy the landlord. It was, therefore, to the interest of all parties that permanent improvements should be carried out by the landlord, who ought to be able to say to his tenant, "Only tell me what is necessary to be done in the way of permanent improvements, and I am ready to make them, provided you can afford to pay me a reasonable interest for the money; all I ask of you is good and clean cultivation; and for that you are protected from loss by your tenant right."

He thought a fair interest for money expended by the

landlord should always be demanded; for it operated in this way—that when a tenant found he could get what he wanted without paying anything for it, there would be no limit to his wants; but if it were put to him that whatever he wanted done he would have to pay a fair interest for, it then came to the double consideration of what he really wanted and what he could do without. He would conclude with the remark that, in spite of all the imperfections and difficulties that had been described, British agriculture was still at the head of the agriculture of Europe. Continental nations might surpass us in fine arts, in arms, or abstract knowledge, yet the superiority of English agriculture was incontestible, and in this small island there was raised a greater amount of produce in proportion to its area, than was ever known before in the history of any nation in the world. If the principles he had advocated were applied, British agriculture might not only maintain its present *status* but achieve yet greater triumphs.

Mr. W. Mathews, Jun. (Member), would confine his remarks to one or two points in the observations of the last speaker; and, in the first place, would say that it was not a large *gross* produce per acre which was wanted, in a national point of view, but a large *net* produce. If the farmer got sixty bushels of wheat per acre, where he formerly raised but fifty, and received no more for the extra ten bushels than the cost of production, he was not benefited thereby; the thing to aim at was the largest *net* produce possible, and the highest possible interest for the capital which the farmer had invested on his land. He agreed with Mr. Huskinson, that all fixed charges on the land should be paid by the landlord; yet the difficulties connected with so doing must not be overlooked. As a general rule, it was desirable that the tithe rent-charge should be paid by the landlord; but when the landlord

did pay it, the tenant of the farm was certain to get a larger income tax assessed upon the gross rent. The owner was equally certain to have to pay, and he could not get it deducted when he paid the money to the tithe owner, but had to appeal to the authorities at Somerset House; and he might consider himself fortunate if he recovered the income tax in twelve months. He thought it desirable, that in all cases, such arrangements should be made as to admit of the deduction of these fixed charges from the amount of the valuation. It was always known in the neighbourhood whether the tithe was paid by the landlord or by the tenant; if by the landlord, the deduction should be made in the valuation, so that there should be no difficulty in getting back the money; but, in the present state of things, it was to the advantage of the landlord to throw these charges upon the tenant, because he thus got rid of the trouble respecting the payment of the government taxes.

It appeared to him of great importance to draw a sharp line between tenant right for manuring, &c., and for permanent improvements; for, if in this country, we got into the habit of treating as permanent improvements all that tenants said they had done on the farms, we should be involved in endless difficulties. The permanent improvements should always be done by the landlord. If draining, for instance, was done by the tenant there was risk of its being done inefficiently; and if, at the end of his term, he claimed to have it valued as a permanent improvement, it was difficult for the umpire to say that the estate had not been benefited to the extent of the demand made. Again, a tenant might expend £100 on additions to farm buildings, and it was possible that they might not have added to the value of the property in the smallest degree; and the umpire would find it hard to say that, under the circumstances, the tenant should not be paid for them. He agreed with Mr.

Huskinson that everything in the shape of high manuring should be paid for as tenant right, and that everything in the shape of additions to farm buildings, and other permanent improvements, ought to be paid for by the landlord.

Mr. T. S. Woolley (Member) said that he had a firm belief in the soundness of the general principles so forcibly enunciated by Mr. Huskinson, and had for some years past acted upon them in his practice. One of his objects in rising was to thank his friend, Mr. Ryde, for the liveliness he imparted to the discussion at the last Meeting, by his defence of the Surrey custom as to tenant right. He could, indeed, only account for that defence of it, on the supposition that extreme familiarity with it had led him to regard it with favour, on the principle illustrated by Pope's well-known lines:—

> "Vice is a monster of such hideous mien,
> That to be hated needs but to be seen;
> But seen too oft—familiar with its face—
> We first endure, then pity, then embrace."

He himself had only seen it in one or two cases, and his virtuous horror of it was still in full force.

His principal object was, however, to draw Mr. Ryde's attention to the circumstance that his remarks at the last Meeting, on the subject of rating tithe rent-charges, were made under a wrong impression as to the facts, and, considering his recognized position as an authority on the subject of rating, it was most desirable that he should reconsider the subject. Mr. Ryde observed that at the time of the "Tithe Commutation," the average rates were taken into account and added to the amount of tithe, so that the tithe rent-charge, as now fixed, included not only what was due to the tithe-owner, but the average rates and taxes he had himself to pay. The fact was, however, as he (Mr. Woolley) had special reasons for knowing, that the rates were only taken

into account under the following circumstances :—The average of the tithe-owner's yearly receipts, for the seven years previous to 1835, was taken, subject to variations within certain limits, as the datum for the future tithe commutation rent-charge, and the only cases in which rates were added, were those where the tithe-owner had not been assessed. As he was legally liable to assessment, the rates, which he ought to have paid, were, in those cases, treated as having been paid for him by the occupier as part of their composition (in addition to these payments in cash), and as forming, consequently, part of his receipts.

Prior to the commutation, tithes were dealt with in one of these three ways :—

(1) Either they were taken in kind or (2) a bargain was made every year with the occupier in respect of each crop, or (3) a yearly composition was agreed upon between the tithe-owner and the occupier, commonly with the understanding that the former should not be assessed. It was in the last of these cases only that the rates were taken into account, in fixing the rent-charge ; even if there had been an omission to rate the tithe-owner in the other cases, no such addition was made, for the obvious reason that the tithe-owner had already got the full value of the tithe. Under these circumstances, it was clear that the question as to the assessment of the tithe rent-charges, was not affected in any way by the proceedings under the Tithe Commutation Acts.

Mr. Robert Clutton (Member) agreed with Mr. Huskinson that the Lincolnshire mode of assessing tenant right and paying the tenants, was an equitable one. He believed they were not liable to the frauds which were too often practised in Surrey. Frauds, undoubtedly, there were, and that was his great objection to the system. It demoralized

the tenant, and demoralized the man who acted for him, and this opinion he had given in his evidence, many years ago, before a Parliamentary Committee. Compensation for unexhausted improvements, under certain restrictions and honestly assessed, was quite unobjectionable; but the tenant right of Surrey was a premium on fraud. It consisted of items of valuation which no man could test, such as half fallows, and half dressings, &c., and the manner in which the outgoer did the work for his successor, was most abominable. One of these valuations, made in 1814, and which he had with him, included such items as 20 times drag harrowing, 16 times small harrowing, 6 ploughings, 12 rollings, and 3 couchings; and this valuation was made by gentlemen well known and respected in the county. The Surrey custom was established in this way—certain valuers met at the county town of Guildford, and determined among themselves what these valuations should consist of. Strange to say, the landlords allowed this to go on without any interference on their part. Their rents were then rising (for it was during the war), and it never occurred to them that burdens were being brought upon the estate which were of vital importance. Nothing in his experience (and he was sorry to say that it extended over a period of fifty years) had done the county so much harm as this custom. He would like to ask Mr. Huskinson how the worth of the fallows was managed in Lincolnshire. As far as his recollection went, the bills were produced for the manure? He would also ask whether hay was the subject of valuation?

Mr. V. Buckland (Member) fully agreed with Mr. R. Clutton that the Surrey custom was a premium on roguery, and as that gentleman said, it was impossible to test what a man spent on his fallows and half fallows, and half dressings and clover leys, though he confessed that, in his practice, he had never paid for anything like the number

of harrowings, rollings, and ploughings, that had been mentioned. Land must be in a very bad condition to necessitate such a number of cultivations, although reasonable cultivation of fallows should be paid for. He was surprised that the Irish Land Bill, now under consideration in the House of Commons, had not been alluded to in this discussion; for it was the opinion, not only of people outside the House, but also of such men as Mr. Gladstone, Mr. Lowe, and Mr. Disraeli, that whatever was done in Ireland would have an effect upon tenant right in England. If Parliament passed this Land Bill, and gave tenants in Ireland the power of buying the freeholds, advancing the greater portion of the cost of doing so out of the public purse, and also assisted landowners in borrowing money on easy terms, the landowners and tenants of England would not be satisfied unless similar advantages were extended to them also. The Ulster custom, which was the one recommended for adoption throughout Ireland, involved compensation, not only for unexhausted improvements, but for all improvements, and for goodwill; what that goodwill was, and on what principle it was to be based, he could not imagine; he believed it went from something like three years' rent up to forty; but he had been told, by an agent for one of the large City Companies, that on their estate the average was twelve years, and they were trying to reduce it to five years. If this was to become a legal claim, it was difficult to see how they could resist a similar claim for goodwill in this country; and he considered it to be a subject which should engage the attention of land agents in England.

With respect to leases, although farmers generally preferred them, he did consider them, with good tenants and high farming, to be necessary. If a tenant had a two years' notice to quit at Michaelmas, he was able to get a considerable amount of his interest out of the land in

that time, and yet leave the land in good condition for his successor.

He agreed with Mr. Huskinson, that the landlord should undertake all permanent improvements; but it sometimes happened that he could not do so, and the tenants were obliged to build or drain, in uncertainty as to whether they would be repaid the outlay. Under such circumstances, they would naturally do the work as cheaply as possible; but if they knew that they would be reimbursed a proper proportion of the cost, they would do it well. If draining were well done, it would last much longer than the period of seven or ten years usually allowed for it; and the tenant should be paid for his unexhausted interest in it, at the end of his tenancy.

Mr. Huskinson, in replying to a question put by Mr. R. Clutton, with regard to the mode of estimating tenant right on fallows in Lincolnshire, said, the principle adopted was that of paying for visible results, and not that of paying for whatever was stated to have been done. The amount of ploughing, &c., sufficient to make a clean fallow was estimated, and that allowed for only.

With regard to the allowance for manure in Lincolnshire, vouchers were produced which were capable of being tested. But he would be sorry to advocate a tenant right which admitted of the uncertainty and extreme injustice likely to arise from a system of allowance for dressings and half dressings, and which gave a premium for bad farming, and for work which there was no means of testing. Any small portion of hay left was valued at the customary price.

It had been very properly said by Mr. Mathews, that what we want (in a national point of view) is not the largest amount of produce, but the greatest amount of produce at the least expense. If other countries could produce any crop more cheaply than ourselves we must apply ourselves to other

products; but this led him to remark that, while the iron-masters could blow out their furnaces, or the cotton-spinners work short time when prices were against them, the agriculturist had not resorted to any of these expedients; and he, therefore, could not help admiring this courage of the British farmer, who had met the difficulties, brought on him by legislation and foreign competition, with an attempt to increase his power of production instead of decreasing his expenses.

Mr. R. Clutton would trouble Mr. Huskinson with one further question—Was the valuer at liberty to make deductions for deficiency of cultivation as a set-off against the claims of the tenant?

Mr. Huskinson replied that, he was practically at liberty to do so. As he understood it, if a fallow was left in a foul state, the tenant would not be allowed the price that would be paid for a clean fallow.

Mr. E. Ryde (Member) said, that as he would soon have another opportunity of explaining the apparent difference between his views and those of Mr. Woolley, on the subject of tithe commutation, he would now content himself with stating that he was old enough to have been concerned in many commutations, and could say that in every one of those, at all events, the commuted rent-charge included the tithes and rates added together.

Mr. E. P. Squarey (Member) said, that in the brief reply he had to make upon the discussion, he begged in the first instance to assure those gentlemen, to whose remarks he did not propose to allude, that he was not, on that account, the less conscious of the value of the views they had placed before the Meeting. It appeared to him,

that the absence of specific covenants as to cropping, should not relieve the tenant from a general liability to farm liberally and well. One gentleman remarked, that the absence of covenants prevented the tenant, or his executors, from being bound in any way in case of bankruptcy or death; but it was obvious that the executors of a deceased tenant would have to undertake the responsibilities under which the tenure was granted. Any difficulty of this kind could be obviated by putting a short clause into the agreement, to the effect, "that in the event of bankruptcy or death, if the tenancy was determined by these or other causes, the claims for dilapidations and over-cropping should be taken as if they had occurred within the last four years of the term." But it was not desirable to legislate for exceptions, which would be rare, in proportion as more liberality with respect to tenant right was exercised, and these exceptions would be more than balanced by improved cultivation.

He had intended to allude, in his Paper, to the arbitration clauses, which now formed part of all agricultural leases or agreements. His belief was that landlords, as a rule, hesitated to accept these clauses, because they did not know the tribunal before which the case would be taken. Such matters were too frequently committed to the arbitration of local men, who, however honest, might, to a certain point, be influenced by the circumstances by which they were surrounded. It, therefore, appeared to him desirable that the arbitration clause of leases should, to some extent, limit the choice of the arbitrators; for instance, it might set forth that they should be chosen from amongst the Members or by the Council, of this Institution; he thought that landlords, under such circumstances, would be more satisfied that justice would be done. He had no hesitation in avowing his opinion that in the system of tenant right, as propounded by Mr. Huskinson, lay the true source of im-

proved agriculture; but it was necessary to define, in the most precise terms, what was really meant by tenant right; and on that point the views of Mr. HUSKINSON were of great practical value. He quite concurred with that gentleman that all permanent improvements — such as buildings, roads, and especially drainage—should be undertaken by the landlord, and the expense borne by him alone, the tenant being left free to employ his capital in other and more profitable ways.

The PRESIDENT (in closing the discussion) said that, although he had not the good fortune to be present on the last two occasions, he had carefully read all the observations made. He proposed to follow the order adopted by Mr. SQUAREY in his observations. First, with regard to rent. It had always been his practice to recommend the grant of leases where he found responsible tenants, and to make the rents reserved, *net* rents. He was led to do so by a circumstance, which he would relate:—In his earlier life he was concerned in business with the South-Eastern Railway, which passed through a nobleman's estate. Upon that estate the tenants were as good as could be found anywhere, and they farmed their land as highly as possible. One morning, on the 25th March, every one of those tenants had notice to quit, though the old agent had previously told them, within a month or two, that they were as safe in their occupations as if they held leases. The landlord had, in the meantime, been advised to let his farms by tender, and the tenants, with one exception, were thereby deprived of their occupations. That circumstance made such an impression on his mind, that he determined to induce, if he could, every landlord to grant and every tenant to take a lease, as he considered that without it, they were not safe from any event that might arise. The

agent or the landlord might die, and the trustees might feel bound to make the most of the estate. In those leases it is provided that the tenant should pay almost every charge; and, in the matter of repairs, that he should find not only labour, but materials. Under such circumstances, the tenant found it not only his duty but his interest to keep up the repairs, as he knew that, at the end of the term, he would be called upon for dilapidations if he failed to do so.

He agreed with Mr. Huskinson that, in the case of annual tenancy, a liberal tenant right was the proper thing. He had lately re-let a large estate in Lincolnshire, where not one tenant out of forty desired to take a lease; they preferred to take their farms from year to year, being paid a liberal tenant right. He agreed, also, that no tenant right should be allowed but that for which the outgoing tenant could produce the bills, or for what the valuer was able to see.

Second, with regard to covenants. In his leases he was obliged to have some covenants for management; but the restrictions were confined to the two last years of the term, and, towards the conclusion of the last year but two, notice was given that the owner was ready to renew the term for 21 years; so that if re-letting was carried out, the question of the two years' exhaustive management, which had been so much discussed, did not arise. With regard to the remainder of the term, there was always a stipulation that the land should be farmed according to the best system adopted in the district; but the tenant was not restricted to any particular course of cropping. He knew very well that a tenant might break down and be placed in difficulties; still, he thought it better to give the tenant the occupation of the land for a period. He had long been of opinion that a tenant, if he farmed his land well, and put a due amount of capital into it, should have opportunity afforded him of taking a reasonable part of it out again.

Permanent improvements should, he thought, be done by the landlord. Tenants were seldom architects or engineers, and generally did the work most imperfectly; and if, at the end of the term, the landlord agreed to pay, it was almost impossible to test the value of the work.

Third, as regards repairs on entry. His own rule had been, when a tenant entered upon a farm, to agree with him upon an amount to be laid out in repairs, and for all beyond that sum to charge the tenant with interest; the tenant was then as much concerned as the landlord that the money was properly laid out, and, in fact, became a partner with him in the outlay.

And lastly, as regards the entries between outgoing and incoming tenants. There was no doubt that a Lady-day tenancy, in Lincolnshire, seemed to answer well. He thought, however, the Michaelmas tenancy, certainly for the south of England, was the best. In all estates with which he had to do, in Lincolnshire, they had converted the Lady-day tenancy into the Michaelmas; and it was found, as a rule, that the tenants preferred it to Lady-day: they entered at once upon the land, paying for fallows and taking all the straw, hay, and roots, for a consideration equal to their value as food, and thus avoiding all double holdings. In Herefordshire, and parts of Wiltshire, the inconvenient custom of way-going crops obtained; but he had found it expedient to get rid of that custom as quickly as he could. The custom was fast disappearing.

It was agreed that Mr. MATHEWS' Paper, "A Plea for Culture in the Profession of a Surveyor," should be taken as read, circulated to the Members, and discussed at the next Meeting.

The Meeting was then adjourned.

A

PLEA FOR CULTURE IN THE PROFESSION OF A SURVEYOR.

By JEREMIAH MATHEWS, Vice-President.

Read at the Ordinary General Meeting of the Institution of Surveyors, *March 21st*, 1870.

JOHN CLUTTON, PRESIDENT, IN THE CHAIR.

The subject of Education which was introduced by Mr. Sturge, in his excellent Paper of last session, is of such magnitude, and of such paramount importance to all of us, especially to those who contemplate bringing up their sons to work with them and to succeed them, that I make no apology for bringing it forward again. I cordially agree with most of what that gentleman says, but as there are portions of his Paper on which I differ, I venture to offer my own opinions, feeling convinced that the more it is discussed the more likely we are to arrive at a just conclusion upon it.

We appear to be on the eve of a great revolution on the subject of Education. It has become one of the social problems of the present day and is agitating all classes, from the highest to the lowest. At the Universities, great changes have of late years been introduced, and greater changes still are being now discussed. The constitution and course of instruction in most of our great middle class grammar schools has been lately the subject of legislation,

and a complete revolution is now proposed in the primary education of the working classes.

We naturally enquire how it is that the question of Education is assuming this importance.

With respect to the working classes, there has been, for the last few years, a general depression of trade, and the belief is gradually spreading that this may be partly explained by the fact that our artizans are deficient in intelligence as compared with those of other countries, and are, therefore, competing with them under a disadvantage.

Whether this is a satisfactory explanation or not, the fact of the deficiency of intelligence of our artizans is universally admitted, and the remedy proposed is, that more time should be given up to a good primary education in order to develop their faculties and intelligence before entering upon the special occupation of their lives.

And this idea is not confined to our artizans only. We have constant complaints of the deficiency in intelligence of our middle classes, tradesmen, and manufacturers; the result of parents removing their children too soon from the school to the counting house, or the office, in order to obtain at the earliest possible moment, their assistance in the great battle of life; or because parents believe this to be the best way of educating their sons for their future struggle.

Now, in order to lay before you, practically, my ideas of education in its bearing upon our own profession, I must offer first one or two general observations, in order that we may have a definite conception of what we really mean by education, and what kind of results we expect to derive from it.

We may, in the first place, regard a man as a refined animal with appetites that demand gratification, a cunning mechanical organism for the production of wealth, which, by

a judicious training, is to be made to do the greatest amount of work in the most economical way; and with this idea, that education will be the best which specially qualifies a man for fulfilling that narrow round of duties which the sub-division of labour in all civilized communities, imposes on the individual as his special contribution to the commonwealth.

On the other hand, we may regard a man as a member of the vast human family, responsible for his acts, first to his Creator, and secondly to his fellow men—a being capable of great things, either of good or evil—possessing a mind, the cultivation and development of which may make him of infinite service in contributing to the happiness and welfare of his fellow-man; but the neglect of which may be disastrous both to himself and others. With this view, we should count a man educated in proportion to the exactness, the width, and nobility of his ideas. Education would then aim at a general development of the mental faculties and, for a time at least, be independent of that technical instruction for particular employments or professions which every one of us who has to fight his own way in the world must, of course, sooner or later, acquire.

There is no theory of education which does not involve, practically, both these ideals. We admire the nobleness of the latter, but we are too apt to say, "this is not for us who have to fight for our daily bread, we have scarcely time enough in this life to master the details of our business," and thus, while we admit the truth of the one, we too often, practically, act on the other.

It will be my endeavour in this Paper to show, that the latter ideal is not only the noblest, but also, practically, the best, and that as a general rule, and especially in our own profession, a thorough general education for the development of the

mental faculties, one carried much further than is usually the case with us, will tend to a far better performance of our particular professional duties—that by this increase of culture we shall certainly produce nobler specimens of men, and, most likely, more perfect surveyors.

I am no advocate of exclusive technical education as applied to professions. Its greatest advocate is a gentleman of high reputation who, two years ago, presided over the education of this country, and, singular enough, has attained his present position by a training the very reverse of technical.

If his education had been so restricted, it is scarcely probable that he would have influenced the opinions of his countrymen through the pages of the *Times*, or assisted in the Government of his country as a Cabinet Minister.

The disadvantage of abandoning, too soon, a general education, in order to pursue some particular branch of study, is manifest. It warps the mind by confining it to a single channel of thought, and thus renders a man incapable of understanding or appreciating the motives which guide the actions of men differently educated from himself. This is one reason why so much misunderstanding exists among men; for educated in so many special directions, they regard the same object from so many isolated points of view, that it may appear different to each.

No doubt this is partly due to natural causes; for, as each department of knowledge becomes more developed, there is for each successive generation so much more to learn in it, and so many more facts to be retained as groundwork and starting points for future discovery. Now, as a subject becomes thus continually developed, it naturally becomes divided into various branches; each branch attracts its special students; and the result is a continuous sub-division of labour.

Science furnishes a good illustration of this sub-division.

Scientific discoveries have in our own time been so vast, and progress so continuous, that it takes a lifetime to master the facts relating even to a single branch. A modern scientific discoverer is therefore obliged to devote his attention almost exclusively to his single branch, and although this is the surest way of advancing science as a whole, yet it undoubtedly has the drawback I have previously mentioned, viz., that the student is too apt to consider his speciality all important, and to look with misunderstanding and indifference on other branches of mental culture, which, by reason of this warping of his mind in a particular direction, he is unable adequately to sympathize with. Scientific men of the preceding generation were certainly superior in this respect—they were able to know something else in addition to their special study. Many of them were distinguished literary men, and their more extensive general culture gave them a completeness and a sympathy with all knowledge which few of the present day possess.

The landmarks of the professions have been similarly broken up in consequence of this inevitable sub-division of labour. Take our own profession as an example, and consider how it has grown up. We have a recognized existence, we have grown into an Institution. In the beginning of the career of many of us the modern surveyor was unknown. The owners of property had, for the most part, legal professional men as their confidential advisers, who collected their rents and managed their estates, generally, in a very inefficient manner. The surveyor occupied a simply subordinate position—generally employed by the professional man and without any particular training, except what he acquired by his own practical experience. But now, stimulated by the vast improvements in agriculture, by the rapid development of our mineral wealth, by the immense extension of railways,

and by other causes, the surveyor has gradually acquired an independent position: he is now, himself, the confidential adviser of owners of property, instead of being dependent on other professional men for employment.

It is well for us to be reminded of this gradual continued increase in the importance of our profession, in order that we may be more impressed with the necessity for a simultaneous expansion of our education and culture.

To what, then, has our profession grown, and for the fulfilment of what duties should we seek to qualify ourselves? We must have a thorough knowledge of the agricultural value of land, and should, therefore, be practical farmers. For the general management and improvement of an estate we must know something about building and architecture; about draining, surveying, levelling, and the cultivation of timber. We must know, too, the mineral resources of the properties with which we deal, which in itself opens up a vast field of knowledge; we must be familiar with manufacturing and commercial properties; we must be good accountants (not so simple an acquirement as some seem to imagine); and we should at any rate be able to solve *ab initio* those problems in annuities, life interests, reversions, and other subjects, the solutions of which we are in the habit of extracting, mechanically, from published tables.

This certainly seems a long list of acquirements; but something still more important is demanded from him who would excel in our profession. He must be qualified to act as witness, arbitrator, or umpire, three qualifications which demand the most careful training. As a witness, he must have clear opinions and clear reasons for holding them, and these opinions he must be able to express in concise and lucid language. As an arbitrator, he should have the qualities of an advocate, discriminating those points most favour-

able to his own case and lucidly enforcing them. As an umpire, he should have the qualities of a judge, skill and judgment in weighing evidence on both sides, and in selecting only the material points, not stubbornly clinging to a preconceived opinion, but open to the reasons and arguments on each side, and possessing ability to sift them.

The surveyor should also have a literary and logical culture, in which I am bound to say we are, for the most part, deficient, which will enable him, in the reports he has so constantly to make, to arrange his arguments and opinions in the most concise and logical form; and, finally, he must above all things have tact in dealing with his fellow-men; for, as he must advise the wise and the foolish, the learned and the unlearned, he must have the skill to enter into the minds of those he comes in contact with and to see things from their points of view, in order that he may know what kind of arguments will be most likely to convince them.

Now a thorough knowledge of most of the acquirements I have mentioned would require the experience of years. A surveyor cannot be so good a farmer as a man with as good an education and ability who spends his life in nothing else; he cannot be as good an accountant as a professional one; he cannot know as much about building as an architect; he cannot weigh evidence like a judge. Nevertheless, our work is not at present so subdivided that many of the gentlemen I am addressing would shrink from giving an opinion on most of these subjects, or from occupying any of the positions I have described. A surveyor then, who would excel in his profession, should aim in the first place at acquiring a sound knowledge of the rudiments of each of its branches, and then a perfect knowledge of as many as he is capable of mastering; and this is in fact a limited form of

my general theory of education, viz., that a man should know one thing perfectly and know something of everything else. I do not mean that he should have a superficial knowledge of other things; but a knowledge which is real in its character, though it may be elementary and limited in its extent.

With this view, I consider the best preparation for our profession to be a high general education, because I believe that a mind thus trained, may be made capable of acquiring its technical details with a comparatively small expenditure of time and labour.

Let us see what branches of learning are included in such an education, and what influence, direct or indirect, they would be likely to have on our profession.

For the sake of simplicity we may class them under three heads, science, mathematics, and literature and logic.

The direct value of scientific knowledge, especially that of chemistry, botany and geology, is obvious.

We learn from chemistry the component parts of our various soils and of the plants we grow upon them. We therefore know what elements of the soil a particular plant will assimilate, and, hence, what we must replace there in order to continue the cultivation of such a plant; in other words, we learn the science of manuring.

Again, a botanist from his knowledge of plants will see at a glance the nature of the soil on which particular plants are growing, whether it is barren or productive, wet or dry, light or heavy, so that starting with this knowledge, a valuer, with a comparatively short practice, will be able to give a reasonable opinion on the agricultural value of land. The same may be said of the geologist; but, independently of the value of geology in an agricultural point of view, to the surveyor who has anything to do with the immense

mineral properties of this country, a deep knowledge of this science is indispensable.

The knowledge of mathematics, even of a high order, is of direct benefit. Including the more elementary knowledge of figures in this subject, it is of course essential that we should have a thorough knowledge of book-keeping, of the best methods of keeping our farm, estate, and other accounts. Questions of life interests and reversions, &c., require a considerable knowledge of mathematics for solution, and, though we are supplied with tables which solve most of such questions without our thought or trouble, yet cases often arise in which our tables are not applicable, and it is therefore on all accounts desirable that we should be able to solve all such questions by the light of our own knowledge.

But, independently of the direct practical bearing of science and mathematics, their indirect value in training and disciplining the mind, is incalculable. It is a man's great interest, all through life, to find out the truth about those things, no matter of what kind, with which he is concerned. To do this he must be able to judge correctly of the facts which come before him, an ability which constitutes one of the greatest distinctions between one man and another, and to do which with effect, needs all the resources which the most perfect system of intellectual training can command. For this purpose the value of the study of mathematics and science is essential.

Mathematics teaches us the method of arriving at truth from reasoning; it obliges us to lay down with exactness and precision all the premises from which we mean to argue, to keep each step in one argument distinct and separate from every other step, and thus to cultivate a habit of mind necessary to the elucidation of truth.

Science shows us how truth can be arrived at from observation. We do not all profess to reason, but we all of us profess to draw inferences from observation; and I may safely say that no man who is not a student of science, can form an idea of what the difficulty of reasoning from experiment or observation really is, or how cautious it is necessary to be if we would avoid false inferences.

I might speak at some length on the bearing of literature and logic, both directly and indirectly, on our profession; but by so doing, I fear that I should exceed my proper limit. I will merely observe, that one of the greatest wants in our education is, the power of expressing our thoughts and opinions in graceful, logical, and grammatical language. We may have arrived at a correct conclusion, either by sound reasoning, or by a correct judgment of evidence; but few of us have the art of writing down, or expressing clearly, the way in which we have arrived at it, laying down, when necessary, first the premises from which we start, then the various steps of our argument, arranged without confusion, and stated without prolixity, so that our conclusion may be at once natural and convincing.

This art can certainly be best acquired by a study of literature and logic.

From these remarks you will understand that I recommend for our own education, before we seek to acquire the knowledge of the technicalities of our profession, a wide mental culture such as is generally thought necessary in the older established professions. It is needless for me to enlarge on the indirect advantages of such a training,—I mean, those advantages which are independent of our profession. We all of us have our times of leisure, but we do not all know how to use them best, and this culture must certainly teach

us how to employ our leisure with the greatest pleasure to ourselves, and the greatest benefit to our fellow-men.

Let us suppose then that this idea of a general cultivation of intelligence is a reasonable and noble one. Shall we, by following it out, detract from our practical use? It is the nature of some people to value an idea, in and for itself, irrespective of the practical consequences which may result from it; but we English delight to call ourselves a practical people, which may be interpreted to mean a people inaccessible to and impatient of ideas. Prescription and routine has more hold upon Englishmen than most other people, and so when we change any of our customs we change them, not because they are antiquated or irrational, but because they are practically inconvenient.

What, therefore, I have been endeavouring to show is this, that the training I advocate is not only not inconsistent with the best technical knowledge, but that it is a very great assistance, both directly and indirectly, in acquiring proficiency in the higher walks of our profession.

The question now arises,—where can we best obtain this culture?

I certainly know of no place comparable to the Universities for this purpose. They are *par excellence* the seats of learning, and possess the greatest facilities for uninterrupted study and instruction in those branches of culture I have mentioned. I do not say that the course of instruction and training is altogether a perfect one. I believe that in some respects it might be greatly improved, and that the number of such seats of learning might with advantage be increased. But great improvements have been of late years introduced, and greater still are even now contemplated, and they are at any rate the most perfect and complete we have.

Moreover, a student there, has the additional advantage of being of necessity brought early into contact with many cultivated minds widely differing from his own. This, in itself, must have a tendency to widen his own mind, and is a means of acquiring that tact and knowledge of men which is an education in itself, and of incalculable practical value in our own profession.

But many object to an University training for us, and these objections may be thus briefly stated.

First.—It is a wasteful, unproductive expenditure of time and money.

Secondly.—There is a great danger of acquiring there idle and expensive, or frivolous and dissipated habits.

Thirdly.—Even if such habits be avoided, there is the danger of acquiring tastes or knowledge which will actually unfit the student for the drudgery which must be necessarily gone through in learning the technical details of a surveyor's profession.

With respect to the first objection, I have already endeavoured to show that the expenditure is not necessarily unproductive. Independently of the humanizing influence of the culture I am advocating, and speaking in a strictly commercial sense, I regard the time and money as capital invested in a particular way, and much more likely than many commercial ventures to be repaid with abundant interest.

On the second objection, I may remark, that it is manifestly much more beneficial to a youth to be brought up with a knowledge of temptation, combined with the power of resisting it, than to be brought up simply in ignorance of the temptations to which he may be subjected when thrown upon his own resources.

Every youth of eighteen years ought to possess that knowledge and self-respect, which will enable him to conduct himself with propriety, when removed from the direct personal influence of his parents or guardians. The fact of his not possessing these (probably due to defective previous training) may certainly be a reason for artificially keeping such a youth out of temptation, but is no reason for condemning the general system of sending youths to the Universities. Moreover, there is manifestly less temptation to evil in the country than in large towns, and yet, I think, few will be found to advocate an education in a country office in preference to a town one. The great benefit to be derived by a youth from contact with the mental activity of a town, notwithstanding its increased temptations, is far superior to that which he is likely to derive from the too general mental stagnation of the country; and, for the same reason, a still greater benefit may be expected from the stimulant of mental activity and competition in places like our Universities.

Again, I by no means admit that a youth is more likely to acquire vicious habits by residence at an University than in a town or country office. A youth of eighteen will naturally expect a certain liberty of action; he will, naturally, have his own intimate associates, and it is by a choice of these that his future habits will probably be determined. Now, at an office—whether in town or country—his choice is necessarily limited; he may almost of necessity be thrown into very indifferent company, and it is certain that he will have a greater choice of bad associates than good ones. But this is not so much the case at the Universities; few may be said to be absolutely bad, few who do not possess some of the feelings and habits of gentlemen; while

a youth, ambitious of good, can always find there congenial friends.

With reference to the third objection, I must say that it appears to my mind to be very much the same as the one we used to hear, years ago, against teaching reading and writing to the working classes, viz.—that we should educate them above their work. I certainly thought such an objection was now condemned to retirement in the most rural districts, and, at least, confined to the agricultural labourer. We have surely not now to learn afresh that it is the man who dignifies the work and not the work which dignifies the man; and that the commonest work will be better done by a man with some mental training than by one without.

I can conceive no kind of work more monotonous, or which involves more simple mechanical drudgery, than part of the work of an astronomer, who spends hours, nay, even days and weeks, in pointing an instrument to a particular star or object, whose path in the heavens he wishes to investigate, and jotting down on paper his repeated observations. He goes through this drudgery because he has a prospect of being able, at some future time, to exercise his mind on his mere mechanical observations. Surely, if this be cheerfully done in a science, which has for its aim the solution of the most profound problems of the universe which can be presented to the mind of man, the drudgery of a surveyor's office, necessary to acquire the technical details of a profession, which in its highest branches certainly demands great thought and intelligence, need scarcely be considered unfit for an educated man to go through.

Doubtless, many cases may be pointed out of youths who have failed in their professions after an University training. But to argue against a general system simply from such in-

stances, is to fall into an error which I have previously mentioned, viz., that of drawing conclusions from partial and imperfect observation. Before we can draw any trustworthy conclusion on the subject, we should at least know the cases of those who have failed without this training, and of these we could most of us record many instances both in town and country.

I am, then, in favour of an University education for members of this profession, where it is practicable; but there will of course be many exceptions to this as to every other general rule. The means may be wanting, or the youth may be peculiarly unfitted for such a course. All we can do is, to lay down an average system and leave each one to judge for himself of the weight of any exceptional circumstances in which he may be placed.

I know that the greatest ornaments of our profession have not had these educational advantages. But let them remember that only men of more than average intelligence, men who would have succeeded in almost any sphere, and under almost any disadvantages, could have raised our profession to its present standard of importance, and that this standard will have to be kept up by average men.

We must all remember, too, that schools and colleges are not the only places of education. The world is a great theatre of instruction as well as of action, and the actual wants and business of the age in which men live, form them for acting a proper part in it. Men of great intelligence, without any other hints than those suggested by their situation, will hit upon schemes to carry on improvement in the world. Much, however, may be done in the course of education, by way of preparing the minds of men for improving such opportunities as occur.

Finally, we must remember that education, like every-

thing else in this world, must be progressive. The most educated man will scarcely be satisfied, without endeavouring to impart to his children a higher education than he possesses himself. Manufacturers and tradesmen are at last beginning to understand this, and to appreciate the value of the culture I have been advocating. Let us, too, recognize it that we may retain and increase the reputation for morality, mental acuteness, and practical utility which the distinguished men in this Institution have already earned for our profession.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, April 4th, 1870.

EDMUND JAMES SMITH, MEMBER, IN THE CHAIR.

The discussion on Mr. MATHEWS' Paper was opened by

Mr. W. STURGE (Member), who expressed his regret at the absence, through illness, of Mr. MATHEWS, more especially as that gentleman had referred to a Paper which he himself had read last session, on the subject of the education of the surveyor. The author stated that, agreeing generally with the substance of that Paper, he differed from it in some particulars. The points, however, on which Mr. MATHEWS differed from him were few and unimportant as compared with those on which he appeared to concur with him. Both he and Mr. MATHEWS agreed (and he apprehended all the Members of the Institution would join them in this) that the great object was to give the student of the profession such an education as would tend to fit him for an eminent position in the profession, and perhaps in time to occupy that chair, which was so well and honourably filled by their President, Mr. CLUTTON. He was happy to say that Mr. MATHEWS and he agreed very fully as to the technical and special professional education which the surveyor should receive. Mr. MATHEWS, in his Paper (p. 222), had set out a list of acquirements necessary for the surveyor, and in so doing had proposed, in effect, the same technical and professional education which he himself had laid down rather more fully

in his own Paper. There could be no doubt that a technical education was as necessary for the surveyor as for the members of other professions. Lawyers, engineers, clergymen, and officers in the army and navy were compelled to undergo special professional training; and, considering the growing importance of the surveyor's vocation, he thought they must all come to the conclusion that special professional training was increasingly necessary for them.

Mr. MATHEWS strongly advocated a university education, and he agreed very much with him as to its enlarging the mind and strengthening the reasoning powers—in fact, in fitting a man not only for his profession, but for the world at large. He still entertained the doubts which he expressed in his own Paper as to the expediency of such an education for a surveyor. In his Paper (Vol. I., p. 51,) it would be seen that, although he had spoken rather decidedly, he had taken both the advantages and disadvantages of a university education into consideration. He by no means pronounced against it in all cases, but he contended that, on the whole, the balance was against it, and he recommended rather that, on leaving school, the young man should pass the matriculation examination at the London University, and go through the course of instruction given at the Royal Agricultural College at Cirencester. His friend, Mr. MATHEWS, and he, might be likened to two engineers surveying a line of railway through a difficult country, both having the same object in view; but while Mr. MATHEWS preferred the Cambridge line, he (Mr. STURGE) was in favour of the Cirencester line.

Now, in the discussion which took place upon his Paper a year ago, the general opinion appeared to be, that the course of education he prescribed was somewhat too exacting. His friend, Mr. LLOYD, made some observations of the kind, saying—

"There were one or two points on which he rather differed from his friend. He thought the education he had suggested, or rather shadowed forth, was, perhaps, a little too exacting. It might not be possible for all persons to follow out that course. It assumed that a very large amount of time was to be devoted to preliminary study, and he feared it would be found impossible for many men to arrive at that state of professional accomplishment which Mr. STURGE suggested, and which, perhaps, might be theoretically desirable. He thought, practically, they found a great many persons became accomplished surveyors without having passed through so elaborate a process of training."

At a subsequent meeting Mr. F. J. CLARK expressed himself very strongly upon the point (Vol. I., p. 87), and remarked—"That the education proposed seemed almost to preclude a man from practically entering into business till he was twenty-seven or twenty-eight years old."

Mr. RYDE had then added some observations, with which he agreed, to the effect that experience was after all the principal thing for practical success. He was unable to see, however, that he laid down, on that occasion, any item of professional training unnecessary or undesirable for the surveyor's education. He was quite aware that there were some eminent men in the profession who were not educated for it, and entered it comparatively late in life; but they themselves would be the first to admit the disadvantage of not having had proper and sufficient technical education in their youth. After all, theoretical education was of little value unless supplemented by that practical education to be acquired from the routine of the office, from actual experience in the field, from the management of estates, and other practical branches of the profession.

Now, it was obvious that these courses of instruction (what he called the theoretical professional training, and

afterwards the practical instruction) must absorb a good many years, and he was willing to admit that the standard he proposed might appear to be somewhat exacting, but it seemed to him that the addition of a university education, as recommended by his friend, would render it still more so. Assume that a young man went to a university at eighteen years of age, that he avoided all those risks to which he might be exposed, made the best use of his time, and came away with his degree at twenty-one years of age, yet he could not be said to have commenced the special technical, professional education necessary for the surveyor. He (Mr. Sturge) was ready to admit that the young man, with the trained mind of a well-educated university man, was likely to surmount the difficulties of his professional education with more ease than a man who had not received those advantages; but still he could not lose sight of the fact that the five or six years (which was the shortest time in which a young man could be expected to complete both the theoretical and practical education, which were necessary to fit him for business) would make him something like twenty-six or twenty-seven years of age before he was able to practise for himself.

This would be, in some cases, an important or even fatal objection, because it did not suit everyone, either in point of expense or time, to educate his son up to that period of life. Practically, he thought it might be said to come to this,—that, in the case of those to whom expense and time were no object, a university education might be desirable, and would undoubtedly be attended with considerable advantages, provided they avoided the risks to which they might be exposed: but he considered that, for the general bulk of the profession, such an education was impracticable,—that it would be found quite enough for the young man to acquire the necessary special professional training, and that it was

almost out of the question, in most cases, for a university education to be added to it.

The Honorary Secretary read a letter from Mr. Mathews, in which he "regretted his inability to attend the Meeting, and hoped that his educational views would find some advocates. He had hitherto spoken of culture, only in its relation to utility; some persons would, he trusted, urge it on the much higher ground of its service in the contemplation of truth, and some, on its scarcely less noble use in adding to our personal pleasure and gratification. It was this latter application of culture which gave to the surveyor a knowledge of, and an interest in, everything by which he found himself surrounded in his daily occupation. It was this which made his profession a pleasure, and gave additional happiness to his life."

Mr. T. Chatfeild Clarke (Member) said, that the result of his observations of professional men was, that they were all, as a rule, too *specially* educated; they devoted themselves too exclusively to their professions, to the neglect of matters of more general interest—such as politics, literature, and the arts. That seemed, to him, to apply very much to their own profession, and was, in his opinion, a great reason why many of them were not better men of business. He did not know whether this feeling was entertained so warmly by many in the room; but he thought, and here he joined cordially with the author of the Paper, that a university education, by bringing a young man into contact with varied interests and views, and all the associations of college life, enlarged and widened his mind and his sympathies. It gave him, also, an acquaintance with things beyond the mere limits of the particular profession he was pursuing, which he could not acquire

during the period of his pupilage, nor when he entered upon the more active duties of his practice. He advised every young man to endeavour to keep up his interest in politics and general literature, which were subjects of great resource to any intelligent man, and ought to keep him from many amusements which were mere idle waste of time. He thought, therefore, that in a discussion like this, the advantages of a broad and general culture, apart from its practical uses in their profession, should not be lost sight of; but that they should, as members of society, keep up a general interest in the varied social and political movements of the times in which they lived. He confessed this subject appeared to him, under any aspect, a large one, but especially so in relation to the education of architects, in which he was specially interested. However desirous an architect might be to give his pupils the best knowledge he possessed, yet the field of education he passed through was not wide enough, nor general enough, nor was it conducted in a sufficiently systematic way. That disadvantage he had himself experienced some years since, and he saw it now in regard to his own pupils. What they required was systematic teaching in the artistic and practical part of the profession; and in order to supply that, opportunities for study were wanted, which had not hitherto been given. He was a former member of a committee appointed for the consideration of this subject, and he was glad to say, through the joint efforts of the Institute of British Architects, the Architectural Museum, and the Architectural Association, such facilities as he had described for the attainment of professional knowledge, were likely to be afforded, and he looked forward to the results with great hope. He suggested that some such practical classes might be formed in connection with this Institution, whereby pupils might obtain the additional

systematic instruction and teaching which they all conscientiously desired them to receive.

Mr. C. Bidwell (Member), as a university man, felt bound to say a few words on the subject of a university education. He would merely remind the meeting of the fact that there was at Cambridge a natural science tripos, in which persons could take degrees in chemistry, botany, geology, and other sciences; and a knowledge of these was allowed to be most useful to a surveyor. Mr. Sturge admitted that a man with a university education, and of varied culture, would be better fitted for the world and for intercourse with the people he was brought into contact with.

Mr. E. Ryde (Member) said, that with reference to an observation which he had made on Mr. Sturge's Paper, and which had been quoted by that gentleman to-night, he might remark that, as Mr. Sturge was absent on the occasion, he took upon himself to say, he thought Mr. F. J. Clark might be a little mistaken as to the time required for such an education as Mr. Sturge advocated. But, after all, experience was the great point in the education of a surveyor; for without it he could not practise; and experience he must get in some way, even if he had to obtain it late in life. All must agree with Mr. Sturge and Mr. Mathews upon the great advantage of education; but what the discussion seemed to be drifting to, was whether it was necessary or desirable that the education should be a university one. It seemed to him that there was an intermediate course that would give an education infinitely better than he himself had received, and better than some of the most able surveyors had obtained, without a university education, namely, the

education which was given at the public schools. A boy at one of those schools obtained a great many of the advantages which the universities afforded, in addition to culture and good education.

He (Mr. Ryde) had sometimes endeavoured to discover the secret of the success of many eminent surveyors, and he always came to the conclusion that it was to be found in the fact, that they did not commence life with too much money in their pockets. If a man started with much money in his pocket, he did not work sufficiently hard to enable him to succeed as a surveyor, nor to acquire a great position in his profession. That conclusion was, he believed, in the main, a perfectly practical truth.

But what were the qualifications which Mr. Mathews, in his Paper, set forth as those which a young surveyor should acquire? He began with a knowledge of agriculture. Now, no one would acquire a knowledge of agriculture who was not in early life thrown upon land, and brought up to country pursuits. It was not enough for a man to send his son to this or that great man, and pay so much money for his instruction in farming. If a boy did not begin life in the fields he would never acquire such a knowledge of agriculture as would help him, in after life, in his business as a surveyor. He did not want a university education for that! Of course, a young man of good education would learn agriculture, or anything else, very much more quickly, and more agreeably to himself, than one without that advantage: but that education, so long as it was good, need not be a university one.

The next branch of knowledge which Mr. Mathews said a surveyor should possess, was such a knowledge of architecture as would enable him to superintend and understand building matters; not, of course, such a knowledge of architecture as would entitle him to call himself an

architect; for, if he studied architecture with such a view, that alone would consume the early years of his life. He supposed Mr. MATHEWS to mean this,—that a surveyor should know how a building should be erected, about what it should cost, and when it was strong enough to answer the purpose for which it was intended, leaving out of the question its pretensions to architectural beauty. It was clear that a man did not need a university education for that.

The next thing was surveying. He (Mr. RYDE) did as much of this for ten years as it was possible for any man to do. He began that kind of work at fourteen years of age; and, therefore, concluded that it could be done very well without a university education.

The next subject mentioned in Mr. MATHEWS' Paper was levelling. Levelling had been done lately more by engineers than by surveyors; but it was a simple operation, and could be learnt in a fortnight, and did not, therefore, involve the necessity for a university education.

Next came timber measuring. He might be disposed to say that timber was never measured. It was done by rule of thumb, in the most unscientific manner possible; and certainly did not require a university education to enable a man to perform it. In fact, some of the best timber measurers he had come in contact with, were men of scarcely any education at all.

Then came a branch which he, personally, knew very little about, which was minerals; but he apprehended the observation would apply with equal force with regard to the surveying of mines, viz., that a university education was not necessary for that.

Then with regard to commerce, of which it was said the surveyor must have some knowledge. He must know the amount for which buildings and other properties should be let for the purposes of commerce, and the particular uses

they could be applied to commercially; but for that, again, he did not think a university education would afford much assistance.

Then came the question of accounts. Now, so far as a university education involved a complete education in mathematics, and particularly in trigonometry, he thought it of great value; but he should be sorry to say that he thought surveyors could not be good accountants, unless they received a university education. The fact was, the best education a surveyor or anybody else could have, was such an education at school, as enabled him, in after life, to teach himself; and the man who intended to be a surveyor, and could not teach himself to be a good accountant, could not, in his opinion, be very successful. Mr. MATHEWS said, that if a man was a good accountant he would be able to do for himself that which he now obtained from tables; but the use of tables did not imply ignorance of the mode in which the problem was worked out, but a desire to save time. The best accountants would use tables in questions involving the calculation of compound interest.

Lastly, Mr. MATHEWS spoke of literary culture as the great want of the majority of surveyors. The reports of many surveyors were not expressed in such a way as they would probably be if written by a man of university education; and therefore, in that respect, he was bound to admit that it would be of value. But he thought that difficulty might be overcome, without recourse to such a training. If a man had a good public school education, he would be able to convey what he wanted in a report, and, perhaps, be logically correct throughout. Therefore he could not come to the conclusion that, because it had been shown that in some respects a university education was advantageous, it had been proved desirable in a general way, or necessary, excepting for one or two purposes. He

thought, when the profession of a boy was determined upon, the best way was to put him into the office of a qualified person, and he would there do more good for himself than if he were sent to a university, always providing he had received a good education. On the whole, he inclined to the belief that for the professional surveyor a university education was not necessary, and that it was very doubtful if it was an advantage worth the sacrifice of time which it involved.

Mr. W. Menzies (Member) said, that he felt inclined to support, to a great extent, the views advocated in the Paper before them. He thought that, in the profession of a surveyor, the race was for the most part to the swift, and the battle to the strong. Every day competition became more and more intense. The lower classes of society were being better educated every day, and if the surveyors of the next generation were to hold their own—and he hoped to live to see them do so—they must advance with the times in which they lived. It was quite true that the technical part of the education of a surveyor was of the first importance,—and a great deal had been said about the experience which it was necessary for the young surveyor to acquire,—but it was also a great thing to prepare the student for that experience, because the mind, when drilled through Latin verses and mathematical problems, acquired a habit of correct thinking which nothing else would give. And besides the technical education which the surveyor must acquire, he should have, for his success in life, the power of influencing and carrying educated people along with him. When they reflected that, in the practice of their profession, they were brought into contact with the highest persons, and had often to advise in matters of the greatest confidence,—not only in the management of estates, but often

in private affairs,—it became of the first importance that the surveyor should have a mind cultivated somewhat in unison with those with whom he had to deal. Since it was not, he believed, a common thing to start young men, as Mr. Ryde had expressed it, with "too much money in their pockets," the best thing was to give them the highest education their parents could afford. Mr. Sturge said, that supposing a young surveyor graduated at twenty-two, it would take five years more to complete the mere technical education necessary to fit him for a post of responsibility, in which he could earn a decent income. That was partially true: but, with the ordinary training now pursued, would he be entrusted with anything of great consequence before he was of the age of twenty-six or twenty-eight? He had, himself, served as a pupil, and was an assistant for four years, and he did things in the office which he could do as well in the first year as in the last, and he thought that Mr. Ryde would have been quite as successful as he was if he had been somewhat less than ten years of his life at the chain. When they considered the changes in the university system, whereby a young man can now acquire proficiency in geology, engineering, botany, and many things of importance to a surveyor, he thought that the time would be as profitably spent at college as in going through the drudgery of a long apprenticeship. It must be remembered that, although he did receive a university education, there were four or five months in the year which he could employ in acquiring the practical portions of his training; and a young man, under such circumstances, who had his living to get, would learn a great deal more in those few months of the year than one who was kept boring at the desk all day long. He was inclined, therefore, to agree with the views of Mr. Mathews on this subject.

Mr. C. M. Bidwell (Member) believed the Paper of Mr. Mathews advocated a system of training which tended to elevate the position of the surveyor in the scale of social importance. He recollected the time when surveyors were held in lower estimation than they now were; and, having the growing importance of the profession in view, he thought that the Institution would be inclined to endorse the views which Mr. Mathews had expressed in his Paper. With regard to the education of the young men at the universities, he would ask the question,—when a boy left school at sixteen or seventeen years of age, what was he fit for? He might be put for a time into an office and then sent to a university, where he mixed with the world and saw a great deal which he could not see elsewhere. The young man there acquired habits and associations which tended a great deal to make him hereafter a man of the world, and gave a vast deal of experience in the affairs of life. It was therefore he considered that Mr. Mathews was wise in recommending that the best possible education should be given to those who were intended for surveyors. Any nobleman or gentleman who wanted an agent, would rather deal with an educated than with a comparatively uneducated man, such as the man who occupied that position twenty-five years ago; and, as education was now making such great progress in the country, he thought it desirable that the surveyors should go with the times. He agreed entirely with Mr. Mathews' ideas on this subject, and was sorry he was not present to-night to support the views he had put forward. In conclusion, he had much pleasure in proposing a vote of thanks to Mr. Mathews for his very able Paper.

Mr. Ryde, in seconding the vote of thanks to Mr. Mathews, said that he had much pleasure in doing so; for, although, on the question of a university education for a

surveyor, he entertained opinions somewhat at variance with those of the author, he felt that no one could read the Paper without being struck by the able way in which the subject had been handled.

The CHAIRMAN, in closing the discussion, expressed his regret at the absence of Mr. MATHEWS, a regret in which he was sure that all the Members would join. The Papers of Mr. STURGE and Mr. MATHEWS put together, in his opinion, exhausted the two sides of the question, and it was extremely difficult to say which of the two views had been most ably advocated. Both of them rested, of course, on the same foundation; the main point on which they differed was, as to the employment of the young surveyor's time, between the ages of eighteen and twenty-six or twenty-eight.

Before he discussed that point, he would take a brief view of the four principal duties of a surveyor, as defined by Mr. STURGE. One of the first occupations of the embryo stage was that of chain surveying, and then followed the other mechanical duties of the profession; and, in regard to them, he concurred with the observation of one of his friends, that they could all be acquired in a short period, and that the expenditure of three or five years over that portion of the business was a complete sacrifice of time. Next came the questions of valuation. For proficiency in this branch a surveyor must understand, not only a single agricultural system, but the various agricultural systems and customs in all parts of the kingdom; otherwise, he would fall into serious mistakes, and that part of the business he could hardly be expected to practise until he was somewhat advanced in professional experience. Another branch—the superintendence of estates—called for different kinds of experience, involving not only a knowledge of the

agriculture of the particular district, of the way of influencing and dealing with the occupiers, but also the same but more difficult task, as respected the owners. Then there came the duties connected with the improvement of estates, whether by re-arranging farms and farm homesteads or in other forms. This necessitated an acquaintance with the systems followed in different parts of England. With the exception of the first of the duties he had referred to, he thought there were few who had succeeded in obtaining any considerable extent of general confidence on the part of other persons, until they had reached a time of life at which a man would, long before, have finished the university career.

The chief point, therefore, to be regarded in discussing the merits of the two systems, was, how the period of life between eighteen and twenty-eight could be most advantageously employed by the young surveyor. Now, at the time he was a young man, the practice was to article pupils for five years; the succeeding five years being occupied in chain surveying and similar opportunities for the acquirement of out-door experience. This enabled young surveyors to gain a knowledge, not only of actual measuring, but of the different systems of agriculture in the areas which they had to survey; at the present time that was almost at an end. As far as he was concerned, he rarely heard now of a chain survey, as the Tithe Commutation surveys or the Ordnance Survey maps were now substituted.

The best way of occupying the interval between the end of the pupil's articles and the time when he had sufficient appearance of age and experience to secure other people's confidence was, at the present time, most difficult to determine; unless the pupil happened to have a father or some one belonging to him in practice, who could employ him. Therefore, he did not regard the period required for a uni-

versity education as a sacrifice of time. Such an education, on the contrary, would enable the person who received it, to enter into active business perhaps earlier, certainly as early, as if he had taken the other course. The difficulty he saw in the way of it was not the sacrifice of time, but that it involved an expenditure of capital of £300 per annum for three or four years; whereas, in the other course, the young man simply passed through his articles and then took a situation, at a salary, for the succeeding five years. If a person could afford it, then he concurred with Mr. Mathews in the university course being the most desirable; at the same time, the decision must be regulated entirely by the particular circumstances of each individual.

The vote of thanks to Mr. Mathews having been carried unanimously, the Meeting then adjourned.

No. 16.]

PAROCHIAL ASSESSMENTS.

By EDWARD RYDE, Member.

Read at the Ordinary General Meeting of the Institution of Surveyors, *April 25th*, 1870.

ROBERT COLLIER DRIVER, MEMBER, IN THE CHAIR.

This Paper contains a description of the various kinds of property in respect of which poor rates are levied, and the manner of valuing that property for the assessment. Property, to be expressly liable to the poor rate under the statute of Elizabeth, must be "locally within the parish;" "visible within the parish;" and, "productive of a private profit within the parish."

Briefly, it may be described as—

1. Lands (in occupation) in the parish.
2. Houses (in occupation) in the parish.
3. Tithes impropriate and propriations of tithes arising within the parish.
4. Coal mines (in occupation) in the parish.
5. Saleable underwoods in the parish.

All the lands in occupation in a parish, except woodlands, are rateable; but, the word "lands" in the statute does not appear to carry the usual legal meaning of that word, because it cannot include houses, as they are separately referred to therein. The words "lands and houses," together, have been held to include all descriptions of landed property used for any purpose above the surface of the ground, excepting that of growing wood and timber. These products of the land have always been held to be exempt, because "saleable underwoods" are specially made liable.

In the same manner, as regards things below the surface of the soil, the Courts of Law have always held that all mines, other than coal mines, were intended to be exempted from poor rate, because "coal mines" are specially by name made liable (Rex *v.* Sedgley, 2 B. and A. 73).

This specialty has raised a difficulty. It has been necessary for the Courts to determine where land, which is rateable, ended, and a mine, which is not rateable, began. In the case of Rex *v.* St. Austell (reported in 5 B. and A. 693), it was held that a part of the produce of a mine (not a coal mine) reserved to the owner was subject to the rate; not as a mine, but as a reservation of the soil or land itself, and the owner was held to be rateable as occupying the land. In the case of Rex *v.* Sedgley, Lord Tenterden thus described the difficulty he felt in attempting to reconcile the judicial dicta on this subject. "The whole mine not being a coal mine is exempt. If the owner works the mine and takes the whole produce, he is not rateable for it, either as mine or land. If he lets it to an occupier, reserving a rent, the occupier is not rateable for it either as mine or land, nor is the owner liable, no one being rateable for a mere rent. But if the owner lets it, reserving a part of the produce, that part is held to be land, although the whole mine, or the whole of its produce is not land, and the owner is rateable for this *part* of the mine as occupier of land, though he would not be rateable for it if he occupied and worked the whole and took directly the whole produce."

In the case of Rex *v.* Earl Pomfret (5 M. and S. 139), it was held that ore of a lead mine, reserved by the owner, which had to be smelted before it was rendered, was not a portion of the soil, and not subject to the rate. And in the case of Rex *v.* Tremayne (4 B. and A. 162), it was held that where the reservation to the owner was the value in

money of a portion of a mine, other than a coal mine, the owner is not rateable for that.

In the case of the Telargoch Mining Company *v.* St. Asaph Union, it was held that the appellants were rateable to the poor rate in respect of the occupation of a stream, which they had diverted from its natural course for the purpose of working the machinery connected with a lead mine which was not rateable. The water-course was about a mile and a half in length, being partly open, partly tunnelled, and for about 350 yards in pipes. The Company were owners of part of the land occupied by the water-course, and part of it they rented. The land was held to be enhanced in value by its capability of conveying water, and not exempt from rateability by reason of its connexion with a lead mine.

Operations involving the consumption of the body of the soil itself, but which do not amount to mining, render the land operated on subject to the rate. For example,—stone quarries, lime works, slate works, salt works, potteries, brick fields, pits of Fuller's earth, sand, marl, and gravel, have all been held to be rateable; but, with this distinct qualification, that if the minerals cannot be got without involving a mining operation, then they are not rateable.

To enumerate all the purposes for which lands can be so occupied as to be rateable, would, in these days, almost amount to an impossibility. There are lands used for agricultural purposes, accommodation lands, building lands, railways, private roads and ways, canals, reservoirs, docks, gas-works, water-works, markets, yards, wharfs, bleaching grounds, fisheries, &c.

As regards navigation and fishing, a mere right over the water without an interest in the land is not rateable.

The right of shooting over land occasionally complicates

questions concerning the rateability of the respective occupiers of the land and the shooting. It was clearly laid down in the case of the Queen *v.* Battle Union (L. R., vol. 2, p. 8), that, where an owner retains in his own occupation woodland, but lets the right of shooting over it with a neighbouring mansion, he is rateable for the land and the shooting, on the ground that the right to take game is an incident to the occupation of the land, and that he derives a benefit, not from taking the game himself, but from a pecuniary recompense made to him for allowing some one else to take it. His occupation of the woodland is productive to him of a value enhanced by the rent which he receives for the shooting.

The case of Reg. *v.* Thurlstorn was of a different character. The landowner had let a farm to one man, and had granted the right of shooting over the farm to another. It was held that the occupier of the farm is to be rated only for the bare occupation of the land (28 L. J., M. C., 106).

The right of shooting alone without the occupation of land, or without connexion with some rateable subject, is not rateable. This was decided in the case of the Overseers of Hilton and Wakefield, and the Overseers of the Township of Bowes (L. R., vol. 1. p. 359). It was there laid down, that, in order to make a person rateable to the poor rate, he must be the occupier of some subject matter which is itself rateable; but the rateable value of the subject matter may be enhanced by something which is incident to the occupation, though not in itself rateable, such as the right of shooting. The case was a very peculiar one. The wastes of a manor had been converted into a stinted pasture under an inclosure award; but, the rights to minerals and of shooting were left in the lords. Thus the right of shooting has been severed from the ownership, as well as the occupancy of the soil.

Springs of water are rateable in the sense that they enhance the value of the lands in which they arise. In the case of R. *v.* Miller (3 Cowp., 69), Lord Mansfield said,—"The value of the four acres of land arises partly from the building and partly from the spring that produces the mineral water." In the case of Rex *v.* New River Company, the land in the parish of Amwell was of the value of £5 only; but, it had a spring in it, which enabled the Company by means of pipes to bring water to London, and which increased the value of the land. The land with this spring in it was therefore rated at £300, although the water alone would not have been rateable at all, and the land alone would only have been rated at £5.

The rateability of "lands" may be very fairly summed up by the "rule of thumb" of our ancestors, viz., that everything in the parish which can be seen is rateable except woods, other than saleable underwoods, provided always that there is a beneficial use and occupation made of them, and that they do not belong to the Crown.

"Houses" being expressly mentioned in the Act, in the same way that coal mines and saleable underwoods are mentioned, it might have been supposed, as in the case of other mines and other woods, that houses only are rateable and other buildings exempt. But, if ever such a construction has been contended for, it has not been held to be law. All houses, whether the dwellings of man, cattle, or animals, are subject to the rate. So are barns and granaries for the housing of corn or produce, warehouses, lighthouses, machine houses, and the like. So also are kilns, furnaces, factories, mills, bridges, and erections of every kind, with the following exception, viz., property occupied for the purposes of the Crown. Neither the Crown, nor the King, nor the Queen, being named in the Act of Elizabeth, is bound by the Act; and it has been held to follow that lands

or houses occupied by the Crown, or for the purposes of the Crown, are not liable to be rated. This principle exempts from rates not only Royal palaces, but also the offices of the Secretaries of State, the Horse Guards, the Post Office, and many similar buildings. Police Courts, County Courts, and even County buildings occupied as lodgings at the Assizes for the Judges, have been held to be exempt on the ground that, in effect, the Crown is in occupation by public servants, carrying out the purposes of the Government of the country. The Queen is the fountain of justice to all subjects of the realm, and buildings which are necessarily occupied for the purpose of administering justice and cognate objects, are within the exception, as buildings really occupied for the discharge of duties arising out of the prerogatives of the Crown. The Queen *v.* St. Martin's, Leicester (L. R., vol. 2, p. 493). The Queen *v.* Castle View, Leicester (L. R., vol. 2, p. 497).

But, nevertheless, in the case of the Justices of Lancashire and the Overseers of the Township of Cheetham (Law Reports, Q. B. Cases, vol. 3, p. 14), it was held that buildings used as courts, lodgings for Her Majesty's Judges and other officers, lock-ups, and all other accommodation necessary for carrying on the civil and criminal business of the Assizes; but, out of which a profit is made by letting portions of such building to the Corporation of a Town, notwithstanding the Corporation use the building for public purposes, are liable to be rated in respect of, and to the extent of the profit received, whatever the occupation may be.

Churches, chapels, and other places exclusively appropriated to public religious worship are also exempt. But the exemption does not apply to any part of such churches, chapels, or premises which are not so exclusively appropriated, and from which parts not so exclusively appropriated,

some person receives rent, or derives profit or advantage (3 & 4 W. IV., ch. 30).

Tenements and hereditaments including lands, which are the property of and in the occupation of a Municipal Corporation in which the limits of the parish are co-extensive with the limits of the city or borough, and in which city or borough the poor are relieved by one entire poor rate, are exempted from poor rates, because it was considered that the imposition of the rate on the borough property would be of no advantage to the borough, as the same parties would be both receivers and payers of the rate (4 & 5 Vict., ch. 48). But, although this view was correct as regarded the particular parish or borough; yet, if such parish now forms one of a union of parishes assessable to the common funds of the union, according to the rateable value of the property comprised therein, under the Union Chargeability Act, 28 & 29 Vict., ch. 79, there are reasonable grounds of complaint on behalf of the other parishes in the union, as the exemption of the Corporation property in the one parish disturbs the equality of the basis upon which the contributions of the several parishes are founded. Notwithstanding this, it has been held in the case of the Queen *v.* Mayor of Oldham (L. R., Q. B. Cases, vol. 3, p. 474) that such property is still exempt, so that it is probable that the question will be litigated again, and this particular exemption will soon be abolished.

Societies established exclusively for purposes of science, literature, or the fine arts are specially exempted by statute from county, borough, parochial, and other local rates; provided, nevertheless, that each of such societies shall be supported, wholly or in part, by annual voluntary contributions, and shall not, and by its laws may not, make any dividend, gift, division, or bonus in money unto or between

any of its members; and provided also that it obtain a certificate from the barrister appointed to certify the rules of friendly societies (6 & 7 Vict., ch. 36). But it has been held that the statute exempts the society and not its property; so that, if the society is rated, its members must appeal (Q. *v.* Justices of Birmingham, 18 L. J., R. M. C., 83).

The Linnæan Society, incorporated for the cultivation of the science of natural history and for the promotion of every kind of improvement in arts and sciences, has been held to be exempt (Linnæan Society of London *v.* St. Anne's, Westminster, 23 L. J., R. M. C., 148). So also has an institution for the collection and maintenance of a library of books for the use of the members and of persons who subscribed for the occasion only. But, an institution established partly for the amusement of its members, such as a concert hall, built and supported by subscription; or a library, a part of which is applied to the reading of newspapers, is not exempt (Q. *v.* Brandt, 20 L. J., R. M. C., 119; Q. *v.* Gaskell, 21 L. J., R. M. C., 29; Russell Institution *v.* St. Giles'-in-the-Fields, 23 L. J., R. M. C., 65).

A mechanics' institution, some of whose rooms are occasionally let out for concerts, lectures, and public meetings, is not exempt (Purvis *v.* Trail, 18 L. J., R. M. C., 57); nor is a subscription library, if a part of its premises are let off to another scientific society (Earl of Clarendon *v.* St. James', Westminster, 20 L. J., R. M. C., 213).

National schools, hospitals, dispensaries, and other similar properties held for public purposes only, where the trustees derive no personal pecuniary profit for themselves, have, until very recently, been considered to be exempt from rates; but the case of the Mersey Docks and Harbour Board *v.* Jones and another (30 L. J., M. C., 239), carried by

appeal from a judgment of the Exchequer Chamber to the House of Lords, has established the contrary rule. Six of the judges assisted the Peers when the argument was heard, of whom, five expressed opinions that the exemption could not be supported. The remaining judge considered that the exemption had been established by a long current of authorities, and could not now be rejected. Since this decision was given, "The Sunday and Ragged Schools (Exemption from Rating) Act, 1869," has been passed, by which every authority, having power to impose or levy any rate, may exempt from the payment of any rate for any purpose whatever any building or part of a building used exclusively as a sunday school or ragged school.

Much litigation has arisen, in connection with the assessment of buildings, concerning the rateability of fixtures, trade plant, and machinery. It was decided in the case Reg. *v.* Southampton Dock Company (20 L. J., M. C., 162) that buildings to which machinery is attached for the purposes of trade, are assessable to the extent of their existing value, as combined with the machinery, whether such machinery be real or personal property. In the case of the Queen *v.* North Staffordshire Railway Company (30 L. J., M. C., 68) it was decided that "things so attached to the freehold as to become part of it," and "things which, though capable of being removed, are yet so far attached as that it is intended they shall remain permanently connected with the railway or the premises used with it, and remain permanent appendages to it, as essential to its working," are rateable.

In the case of the Queen *v.* The Phœnix Gas Light and Coke Company (L. R., vol. 1, p. 241) it was decided that the retorts, purifiers, gas holders, steam engines, and boilers are parts of the works which are absolutely necessary to the

manufacture of gas, which is the purpose of the company's undertaking; that it was intended, when those things were erected, that they should remain permanently connected with the premises, and that they should remain permanent appendages to it, as essential to its working; and, if not forming part of the freehold, they are still so far connected with it as to be intended to be permanently attached to it, and, therefore, they ought to be taken into account, in determining the rateable value of the land and premises. Without the retorts, purifiers, steam engines, and gas holders the premises would be worthless for the purpose for which they were erected:—the building would not be a gas manufactory at all. All these things are fixed, and so far annexed as to be intended to be permanent, and, being really necessary for the use of the premises as gas works, they therefore form part of the rateable subject.

So in the case of a railway, although the sleepers are in no way fastened to the ground, but are laid on and packed up in ballast, and the rails are laid on and bolted to the sleepers only, nevertheless, it has been held that they form as many parts of the rateable hereditament, as does a house, the foundations of which only rest upon a bed of concrete (Great Western Railway *v.* Melksham, J.P., vol. 34, p. 102).

Utensils in trade and furniture are not rateable. The meters of a gas company were held, in the Phœnix Gas case already referred to, to be mere ordinary chattels, kept for the purpose of measuring the gas, and in no sense part of the gas works. In the North Staffordshire Railway case, things moveable, such as office and station furniture, were held to be chattels, and not rateable. In many cases, such things as a mirror fixed to a wall have been held to be furniture, and not rateable; but, a billiard table fixed to a floor

has been held to enhance the value of the house to which it was attached, and in that way to become rateable. Power looms in a silk mill, portable and continually moved from place to place, but steadied by their feet being screwed to the flooring, are not rateable (Reg. *v.* Overseers of Halstead, J.P., 1867, p. 373). It was held that, although such fixtures are no doubt fixed to the freehold, they are, nevertheless, not so fixed as to make them part of the freehold, so that on a demise they would pass with the premises.

"*Tithes impropriate*," are those which have been severed from a benefice, and are now payable to some lay person or corporation.

"*Propriations*," or "*appropriations of tithes*," are tithes severed from a benefice, and annexed to a spiritual corporation.

These are the only description of tithes expressly referred to in the statute of Elizabeth; but, all tithes arising within the parish are rateable, and, every rent-charge payable instead of such tithes, is subject to all rates and taxes, in like manner, as the tithes commuted for such rent-charge have heretofore been subject (6 & 7 Wm., ch. 71, s. 69).

Coal Mines, in occupation in the parish, are rateable for what they produce; that is to say, at such a sum as they would let for. But, as has been already explained under the head of land, all other mines have been held to be exempt, because coal mines are especially made liable.

Saleable Underwoods.—The statute of Elizabeth especially refers to saleable underwoods, and specially makes them rateable. In the early cases, saleable underwoods were defined as being "wood which grows expeditiously, sends up many shoots from one stool, the root remaining perfect, from which the shoots are cut, and producing new shoots, and so yielding a succession of profits." But, in a

recent case, Lord Fitzhardinge *v.* Pritchett (Law Rep., Q. B. Cases, vol. 2, p. 141), Mr. Justice Mellor has very clearly defined what woods are saleable underwoods within the meaning of the statute of Elizabeth. He says, "the question does not depend upon whether the woods consist of what are timber trees, either by general or local custom; the nature and quality of the wood is not the test; but, wherever the woods are treated so as to raise successive crops from the same roots and stools, and, whether the crops ripen, and are cut at intervals of ten, fifteen, or even thirty years, is immaterial; or, whether the woods consist of oak, ash, or elm, which are universally timber trees; or, of beech, which may be timber by custom; or, willow, the stools of which can be and are so treated as to produce a succession of saleable crops: in such cases, the woods are saleable underwoods."

Mode of Valuing Property Liable to be Rated.—There are two estimates required by the statute 6 & 7 W. IV., c. 96, which regulates parochial assessments, viz., "*gross estimated rental*" and "*rateable value.*"

The former is the rent at which the property might reasonably be expected to let from year to year, the tenant paying all usual tenant's rates and taxes and tithe commutation rent-charge (if any), the landlord bearing the cost of repairs and insurance and other expenses (if any) necessary to maintain the premises in a state to command such rent. The *rateable value* is so much of the *gross estimated rental* as remains after deducting therefrom the probable average annual cost of the repairs, insurance and other expenses necessary to maintain them in a state to command such rent, as aforesaid.

The actual words of the statute are very simple when understood; but, it is probable that no words in any statute

were ever more misunderstood, or ever caused more confusion and gave more trouble than they did. They are as follows:—

"No rate for the relief of the poor in England and Wales shall be allowed by any justices, or be of any force which shall not be made upon an estimate of the net annual value of the several hereditaments rated thereunto, that is to say, of the rent at which the same might reasonably be expected to let from year to year, free of all tenants' rates and taxes and tithe commutation rent-charge (if any), and deducting therefrom the probable average annual cost of the repairs, insurance and other expenses (if any) necessary to maintain them in a state to command such rent."

Soon after the passing of this statute, viz., on the 3rd of March, 1837, the Poor Law Commissioners issued a circular defining gross rent as the rent which would be paid to a landlord who himself undertakes to pay all the usual tenant's rates and taxes with which the hereditaments or premises rented by the tenant are chargeable, together with tithe commutation rent-charge, the expense of upholding the buildings in tenantable repair, insurance against loss by fire, and any other expenses, if any shall exist, necessary to maintain such hereditaments in a state to command such gross rent. Net rent they defined as the amount which is received by or which remains clear in the hands of a landlord after all such taxes, charges, and expenses, as are above enumerated, shall have been provided for.

Acting upon these definitions, many surveyors included in their estimates of gross estimated rental the whole of the rates and taxes usually paid by the tenant. For example, in the case of a house worth £100 per annum to a yearly tenant, the rates and taxes upon which amounted to £20 per annum, and the average cost of insuring, repairing, and

maintaining the property £20 per annum, they called the gross estimated rental £120, the rateable value £80.

So far as regards the mere payment of poor rates no injustice was done to the ratepayer; but, in the case of other uses made of the gross estimated rental it became apparent that the intentions of the Legislature had been misunderstood; moreover, valuations so made seemed to estimate the value of property in a parish unfairly and unnecessarily high. It very early became the practice to disregard the instructions of the Poor Law Commissioners and to omit all consideration of rates and taxes in making valuations, and, in 1859, the Poor Law Commissioners were advised by the then law officers of the Crown (Sir Fitzroy Kelly and Sir Hugh Cairns) that the term "gross estimated rent" meant the rent at which the property might be expected to let, the tenant taking the burden of rates and taxes and tithe upon himself. In other words, they were of opinion that the word "free" in the statute must be considered as referring to rent and not to hereditaments.

An attempt was made in the Union Assessment Committee Act, 1862, to remove the doubts which had existed; but, without much success so far as ordinary ability can comprehend it. Nevertheless, the opinion of the law officers in 1859 is now universally acted upon and generally understood.

It must always be borne in mind that the rateable value is not the actual rent at which a property may be let; but that rent at which, after taking all things into consideration, it might reasonably be expected to let. Moreover, it must be remembered that the circumstances to be taken into consideration in estimating the value must always have reference to the period at which the valuation is made.

A house which on the completion of a railway, or some other public improvement will be worth £100 a year, may,

at the present time, be worth only £50 a year. While it is worth £50 it must be assessed at that sum only; but, as soon as the improvement takes place, the assessment must follow the increased value. Again, the rent reserved in a lease may not be evidence of rateable value. A property may possess a gradually increasing value, extending over many years. A lessee, in agreeing to pay a fixed constant rent, would average those circumstances. The rate must be made on an estimate of the annual value from time to time; low, when that value is small, and higher as it increases. Again, property may, from unforeseen circumstances, increase or decrease in value during the term of a lease. If it should increase, it would be unfair to the other ratepayers, who might not be similar lessees, if the assessment upon it were not increased; and, if it should decrease in value, it would be unfair to the lessee not to decrease the assessment. The term from year to year must not be misunderstood, as it sometimes is. It does not mean a letting for a year only, nor a letting on a yearly tenancy; but, it means that changeable circumstances must be taken into account from year to year as they arise.

Valuation of Agricultural and Accommodation Lands:— In addressing the Institution of Surveyors, it is quite unnecessary to attempt to explain the mode of valuing agricultural or accommodation land. Nevertheless, it is well to again point out that the rateable value is not the rent actually paid either on a yearly tenancy or under a lease; but, that it is the rent which, all things considered, a tenant might be reasonably expected to pay for the year next following the making of the valuation. The late Lord Denman, whose judgments were always as clear as it is possible for judgments to be, in delivering judgment in the case of a brick-field appeal, says:—"it may well be that,

although at the end of the year the lessee has made so many bricks that he can afford to pay £150 in royalty to his landlord, yet he could not prudently, at the beginning of the year, contract, at all events, to pay more than £100, and, if so, the latter rather than the former will be the sum at which the land may reasonably be expected to let from year to year."

In the case of accommodation lands; a piece of meadow land may be situated in the middle of another estate and in front of the drawing-room windows of the occupier's house. It is reasonable to suppose that, in such a case, the occupier of the house would give more rent for the meadow land than its value for agricultural purposes would justify, and, therefore, it possesses a corresponding rateable value; but, if such land becomes by purchase a portion of the other estate, it then possesses no greater rateable value than the adjoining lands of which, in fact, it has become part. Small pieces of land adjoining a town will often let at rents quite disproportioned to their agricultural value, and their rateable value is such a rent as they may, in that way, be reasonably expected to fetch, notwithstanding that exactly similar adjoining lands which form part of an adjacent farm can only be reasonably expected to let at their agricultural value.

The difference between the gross estimated rental and the rateable value of land is very small, and, in practice, it has hitherto, for the most part, been disregarded; but, *The Valuation* (*Metropolis*) *Act*, 1869, fixes the allowance, in metropolitan districts, at five per cent., and, therefore, it is presumed that such an allowance will very generally be made in all places in the future. It may be mentioned that, in the case of lands subject to tithes, the amount of the rent-charge should be deducted from the estimates of both gross

and rateable value, the tithe rent-charge being itself rateable as a separate hereditament.

Valuation of Houses.—The *gross estimated rental* of a house is that rent which a tenant might reasonably be expected to give for the right to occupy it for one year, assuming that the landlord bore the expense of insuring, repairing, and upholding it. The *net rateable value* is the rent which a tenant might be reasonably expected to pay, who took upon himself the expense of insuring, repairing, and upholding it.

The *rent* is the rent to be expected for the year following the making of the rate; but, the allowance for *repairs* is to be the probable average annual cost. To give but one instance: general painting, which occurs only once in seven years, is not to be allowed in the year in which it actually is done to the exclusion of all other years; but, a fair average annual charge on account of it is to be taken. In addition to the allowance in respect of indispensable repairs, an allowance is to be made in respect of contingent or future renewals. In the case of The Queen *v.* Wells (Law Reports, Q. B. Cases, vol. 11, p. 548), the most recent decision upon this point, Lord Chief Justice Cockburn stated that there seems no distinction in principle between a sum annually laid by to make good, when it shall become necessary, an inevitable loss by the destructive agency of time, and a fund laid by for an indemnity against a loss by fire or storm, or other peril, insured against.

Valuation of Farm Homesteads.—In estimating the rateable value of farm homesteads, several matters have to be taken into consideration. For example: the buildings may be very much in excess of the actual requirements of the lands of a farm; but it is obvious that a tenant can only be reasonably expected to pay such a rent as the buildings

which he actually requires would command. Even that rent may have to be diminished instead of increased, from the fact that the repairs and insurance of the larger buildings are more costly to the tenant than the repairs and insurance of buildings of the proper size would be.

It may, however, happen that the occupier of such a farm may also occupy, as a separate rateable hereditament, land, either wholly without buildings, or otherwise deficient in that respect, in which case the rateable value to him of the buildings previously alluded to will be increased.

Valuation of Trade Premises, Mills, Factories, &c.—In estimating the value of trade premises, such as a factory fitted up with machines, a foundry with furnaces and forges, or a brewery with fixed steam engines and vats, the value of the machinery as enhancing the annual value of the freehold, of which it forms part, is to be taken into consideration.

An important decision in respect of the rating of mills was given in the case of Staley and another *v.* Castleton (33 L. J., M. C., p. 178). The mill was fitted to its full capacity with the machinery useful and necessary for a cotton mill; a steam engine was fixed for the purpose of turning the machinery, and steam pipes from the boilers were carried through all the rooms in the mill for the purpose of warming them. Some of the machinery was fixed to the floors in order to its steadier working, while, in other instances, it was merely placed upon the floors of the mill. According to the custom of the trade, the machinery was in the nature of tenant's machinery, or fixtures. Before the American war, the property had been of considerable annual value as a cotton mill; but, in consequence of the state of trade during the war, the mill was closed. Nevertheless, the machinery was kept in it, and a man was employed to attend to the fires for the purpose of keeping

up a proper degree of warmth, and to keep the machinery in a state of repair.

The Court held that the mill was thus used as a storehouse for the valuable machinery that it contained, and was to be valued for assessment to the extent of the rent which it would command as such storehouse.

Following this decision came another important case, Harter *v.* Salford (34 L. J., M. C., p. 206). The appellant for many years carried on the business of a silk manufacturer; but, in 1863, he gave up business with the intention of never resuming it. The mill and premises were advertised for sale. The decision was that, although not in use as a mill, the buildings were to be valued as storehouses for machinery.

Hotels, refreshment rooms, Epsom and other race stands, canteens and similar trade premises which, by reason of their special situations command rents in proportion to the extent of the trade which can be carried on in them and nowhere else, must be valued in connection with their trade receipts, *i.e.*, from the gross receipts must be deducted the working expenses necessary to earn the receipts, allowances for trade profit to the tenant, for interest on the capital which he must necessarily employ, and for risks and casualties. The balance is the rent which he may reasonably be expected to be willing to pay to his landlord as rent.

In valuing all descriptions of house property, the question constantly arises,—is cost ever the measure of the rateable value of property? In giving his decision in the Mile End Old Town case, Lord Denman says, "the outlay of capital might furnish no criterion of the rent a property should yield, since such capital may have been injudiciously expended, and what was costly may have become worthless by subsequent changes." It should be observed that Lord

Denman did not there say that cost was never the measure of value, and, obviously, it sometimes is. Assume, for example, that the guardians of a Union are in want of a workhouse, and that some landowner within the Union is possessed of a building exactly suited for such purpose, but that he requires a rent of £1,000 a year for it. The guardians find, upon enquiry, that they can build a new workhouse and provide the land at a cost of £10,000, and that they can obtain the money at the rate of 5 per cent. per annum, which will equal a rental of £500 per annum. They elect to take the latter course and build the workhouse, the rateable value of which is £500 per annum, because that sum is the highest rental which it would be reasonable to expect them to give. Assume, however, on the other hand, that the landowner was unable to get a tenant for his building, for any purpose, at a higher rent than £250 instead of £1,000 a year, and that he therefore would be willing to let it to the guardians at £250. In this case, the rateable value would be £250 per annum only, because it would not be reasonable to suppose that the guardians would pay for any other similar building a higher rent than that at which they had been able to take this from the landowner.

In estimating the rateable value of bridges, as in the case of railways, it does not follow that any direct receipts arise in the parish which is the subject of the valuation. The case of the Queen *v.* the Hammersmith Bridge Company is one in point. It was there held that, although the whole of the receipts were in the parish of Hammersmith, yet the bridge itself was the direct source of the rateable value, and that such net rateable value when duly ascertained was to be apportioned between the parishes according to the length of the bridge in each.

Valuation of Tithe Rent Charges.—The rateable value of a tithe rent-charge is the rent which a hypothetical tenant might be reasonably expected to give for it annually, such tenant having to pay the usual tenant's rates and taxes upon such tithe rent-charge and to derive some remuneration for his time and attention in collecting it (Queen *v.* Capel).

In the case of a clergyman, whom by reason of the number of parishioners and the value of the incumbency the bishop of his diocese could compel to keep a curate, the reasonable salary of such a curate was, in the case of the Queen *v.* Goodchild, directed to be allowed; so also in the case of the Queen *v.* Lamb, where the duties of the incumbent were greater than one man could perform, the curate's salary was directed to be deducted; but, this allowance for a curate has, by the recent case, the Queen *v.* Sherford, been overruled, so that it must now be taken that such a deduction cannot be allowed.

Valuation of Coal Mines, &c.—Coal mines, brick fields, clay pits, slate quarries, &c., which involve the removal of portions of the soil, must be valued according to the rent and royalty which it is reasonable to expect the occupier would pay the landlord for that species of occupation. In the case of the Queen *v.* Westbrook it was held that a royalty so paid must be considered as a portion of the rent.

Valuation of Saleable Underwoods.—Saleable underwoods must be valued at the rental at which they might reasonably be expected to let, according to the quality of the wood and the situation of the land.

The valuation of railways, gas, and waterworks involve considerations so special that the subject is reserved for a separate Paper.

Mr. T. S. Woolley (Member) had great pleasure in moving a cordial vote of thanks to Mr. Ryde for his clear and able Paper, which was so exhaustive that, if the discussion was to be confined to the topics therein dealt with—namely, the incidence of rating under the existing statutes, and the general principles on which the different kinds of property at present rateable should be assessed under those statutes—there was nothing further to be said. He agreed most thoroughly with the author's views, and would take this opportunity of mentioning with regard to the apparent divergence of opinion between himself and Mr. Ryde, on a former occasion, relative to the position which tithe rent-charge bore to rates, that they were now agreed in this—tithe rent-charges are rateable to the same extent as the tithes they represent were before the commutation took place, and in no other sense.

Mr. T. Huskinson (Member), in seconding the vote of thanks, said the subject of rating was one of extreme and growing importance, and especially so in rural districts. There was hardly a subject within the province of the surveyor which required such a combination of legal knowledge and acquaintance with the value of property as rating, and so much tact and common sense in applying that knowledge.

Several Members having expressed a wish that the discussion should be adjourned, to afford them an opportunity for the necessary consideration of the Paper.

Mr. E. J. Smith (Member) suggested that it might be desirable, in the event of the discussion being adjourned, to extend their views in some measure beyond the subject of

the Paper, strictly speaking, and to express their opinions as to the expediency of changes either in the mode of assessment or in its distribution. All must be well aware, as agents, that there had been charged upon the occupiers, under the guise of assessment to the poor, a great number of items, which, in the opinion of many persons, should rather come under the head of imperial taxation. A considerable portion of the difference betwen the 3*s.* 6*d.* or 4*s.* in the pound which was paid now and the 2*s.* 6*d.* which was paid formerly, was occasioned by charges which were hardly of the same character as those which used to be imposed. He thought, therefore, that the discussion should embrace, not only the history of the past in these matters, but should also elicit, if possible, the course which it was expedient to take with regard to the future.

The Chairman, in putting the motion for adjournment of the discussion on the Paper of the evening, said that it had very recently come to his knowledge, that a Commission was either nominated or about to be nominated for the purpose of determining at what proportion, if any, the freeholders of property, let at ground rents, should be assessed in respect of the rates and taxes now imposed, or about to be imposed, on their lessees. It was a serious and important matter for ground landlords. He did not know whether it was desirable to discuss this matter, but it might be desirable to enquire into this subject before the next meeting, and then take it into consideration, and be prepared to discuss it in conjunction with Mr. Ryde's exceedingly able and exhaustive Paper.

Mr. Ryde suggested that the course proposed was a little unusual. If the question of the incidence of local

taxation were to be referred to, it would open up an interminable field for discussion. For instance, it might be suggested that not only should a proprietor be rated for his ground rents, but that stockholders should be rated in respect of their stock in the Funds; and that would involve the question whether the rating should be in the parish in which the Bank of England was situated, and of which it occupied the entire area, or whether the rate should be made in some other parish.

He suggested that they should first finish the discussion of his Paper, and then, if they pleased, enter upon the other topics referred to.

It was then agreed that the discussion of the Paper should be adjourned to the next meeting.

AT

THE ORDINARY GENERAL MEETING,

Held on Monday, May 9th, 1870,

JOHN CLUTTON, PRESIDENT, IN THE CHAIR,

The discussion on Mr. E. Ryde's Paper was opened by

Mr. E. J. Smith (Member), who remarked that the Paper had so completely exhausted the subject that he had very little to say upon it. The only point which seemed to him to be open to a little further explanation was with regard to the precise interpretation of the wording in the first Act. Mr. Ryde seemed to consider that the interpretation of the first section, which obtained from the year 1837 until the decision of Sir Fitzroy Kelly, was accidental; on which decision, after an interval of twenty-two years—viz., in 1859—the present accepted interpretation was substituted. But he (Mr. Smith) believed that the true history was that it was intended by the Poor Law Board that, under that Act, the first column in the assessment book should contain the annual value of any hereditament, after deducting only the occupier's return on his capital, and not the rates, nor the tithes, nor any outgoings Under the existing system, the first column contains an annual value arrived at after deducting the rates and taxes paid by the occupier. It was undoubtedly the intention of the first Act that the first column should contain all that it contains at this time, with the addition of those taxes. It was supposed at that time that the owners would always take upon themselves the payment of tithes, and it was

thought desirable that they should take upon themselves the payment of all other taxes; but the owners did not see it in that point of view, and not only abstained from paying the other taxes, but almost invariably threw upon the occupiers the payment of the tithe rent-charges also. It was found, therefore, that this object of the Act was not obtained, and, after an endeavour extending over twenty years, the attempt was given up, and there came then the different interpretation given by Sir Fitzroy Kelly and Sir Hugh Cairns, which has subsequently been adopted.

He ventured to suggest at the last meeting that it might be expedient to consider in this discussion the desirability of changes, either in the mode of the assessment or in its distribution. As he then said, it appeared to him that a considerable number of charges were now made, particularly in respect of agricultural property, and paid under the head of "poor rates," which ought to come under the head of imperial taxation. At the same time, he did not at all concur in the view that all rates ought to be charged on income tax, and thought any such change (which, as they knew, was advocated by influential representatives of the agricultural interest) not only inexpedient but hopeless. As agricultural estates had always hitherto assisted in maintaining the poor and the highways, and had been purchased and sold under the expectation of doing so, it would be difficult to make out a case for any change by taking off those charges; but he thought that the other charges which had been imposed, and were now charged under the head of "the poor," should rather be paid out of the Consolidated Fund.

Mr. E. P. Squarey (Member) said he would illustrate the subject by stating the facts of his own case. He held his farm on a sixteen years' lease, and when he took it, his parish was a close one, Lord Radnor and himself being

the only ratepayers. The actual rent of the farm was £1,300 a year, and the rates only £75 a year. No doubt he had occasionally employed incompetent men at higher wages than they could fairly earn, simply to keep them off the poor rate, and the actual outgoing might therefore be put a little higher. The Union Chargeability Act came into operation, and his expenditure was increased from £75 to £180, on the average. He felt this to be a hardship, and he appealed to the Assessment Committee to reduce his rateable value, which he should say had been assessed at his rent, *minus* 10 per cent. He asked that it should be reduced by the excess amount of rates he was then paying over what he paid when he took the farm, and then a further reduction of 10 per cent. on that amount. After a good deal of discussion, the Board consented to reduce his rateable value to the lower terms; and on those he continued to pay. He mentioned this as an illustration of the folly of admitting rent, without considering what rent meant, as the basis of annual value. He agreed with Mr. Smith that some injustice was done to the occupiers of farms, by compelling them to pay, under the head of "poor rate," charges which were of a purely philanthropic or sanitary character, and which were not contemptated when the tenancy commenced. He referred more especially to police rates and lunatic asylum rates, in which the whole public was as much interested as the owner and occupier of the land. He thought, therefore, that in the interest of all parties, the whole question of the basis of rating demanded reconsideration.

Mr. J. H. Lloyd (Associate of Council) said he was engaged as referee in a case of the rating of a colliery producing a large annual return, and he had various schemes propounded to him as to the principle on which

this description of property should be rated. Looking at the importance of that interest, more especially in the midland, northern and western counties of England, and in South Wales, it was a question of great magnitude, and by no means free from difficulty; and, with great respect to Mr. Ryde, he considered the question had been treated by him in a somewhat perfunctory manner; for all he said (p 269) on that subject was—"Coal mines, brick fields, clay pits, slate quarries, &c., which involve the removal of portions of the soil, must be valued according to the rent and royalty which it is reasonable to expect the occupier would pay the landlord for that species of occupation." He confessed that he was rather startled by this passage, because the rent and royalty paid to the landlord (if by that expression was meant the sum payable to the proprietor of the land and the underlying mineral) could not be a reliable basis of the rateable value. Royalty was a proportion of the produce raised, reserved to the mine-owner; rent was that which was paid for the area of ground occupied in the working of the mine; but that the rent or royalty, either separately or together, could be the rateable value of the coal mine, seemed to him, an untenable proposition; because it might be that the owner of the mine leased it, having incurred the first expenditure for winning the coal, or it might be that the lessee himself incurred that expenditure; and the royalty of course varied materially according to these varying circumstances. He understood the principle of rating to be—that whatever was the value of the undertaking, in its then present condition, was to be the first item of the valuation. Say, for instance, he had so many acres of coal under a surface area, as ascertained by borings. If a lessee undertook to develop this, he would pay a royalty of so much. The lessee had then to sink his shaft, put up machinery, and incur other expenses; and when thus de-

veloped, it became totally different property. The stereotyped principle of rating was what a man would be willing to give as rent, undertaking all the costs and risk, and reserving to himself a fair interest on the working capital required and a reasonable profit on the working obtained. That was the saleable value, and he apprehended that was as applicable to coal mines as to other property. His friend, Mr. Ryde, had studied this subject a good deal, and he had hoped to have some light from this Paper; but the only gleam of information he had derived was in the paragraph which he had quoted. He deemed it a subject which deserved great consideration, and he held in his hand a very interesting pamphlet (lately presented to the library) by Mr. Hedley, of Sunderland, who had great experience in valuing collieries. Mr. Hedley gave, in the first place, the estimated gross value of coal produced at the pit's mouth, then he gave the working expenses and the expenses of the tenant for management. These were charges against the gross proceeds. Then came tenant's capital and plant. Mr. Hedley took a per-centage upon that, reducing it to an annual interest. Then he took 25 per cent. for tenant's profits, which he (Mr. Lloyd) thought too high, and there was then to be added maintenance and renewal of the tenant's plant, and so at last they got at the net rateable value. His object in rising was to get from Mr. Ryde, if possible, something a little less meagre than the information he had given them in his Paper on the subject of the rating of coal mines.

Mr. W. Eve (Member) desired to refer Mr. Ryde to the passage in his Paper (p. 264), in which he said, "The difference between the gross estimated rental and the rateable value of land is very small, and, in practice, it has hitherto, for the most part, been disregarded; but The Valuation (Metropolis) Act, 1869, fixes the allowance in

metropolitan districts at 5 per cent., and therefore it is presumed that such an allowance will very generally be made in all places in the future."

Now Mr. Ryde had expressed no opinion as to the wisdom of that course, and he hoped to hear that he did not approve of it. The value of land might easily vary from 5*s.* to £5 per acre, and if 5 per cent. were taken off in each case, it was evident that in one case they took off twenty times more than in the other, for exactly the same repairs executed. The same observation applied with more force to houses, and he had ventured to lay these views before Mr. Goschen, when the bill was before the House. He had taken the trouble to investigate the rating of one house in Cornhill, and found that, taking off 20 per cent., as was done in that instance, the rental value being £500, the rating was £400. Now, in his judgment, the land in that case was worth £400, and the structure only £100, and for the repair and insurance of that structure, worth £100, they took off a sum equal to the annual value of it. The same thing applied to land, and he thought it was most unfair that any arbitrary per-centage of that sort should be laid down by the Metropolitan Act. If a schedule of deductions was to be adopted it must, as to house property, apply to the structural value only, and not include the value of the ground, and, as to land, it must be an acreage deduction, and not a per-centage on the value.

Mr. C. Stephenson (Member) said there was no question that the system of rating was not understood by the public authorities. The practice of parishes (even under the same surveyors and assessors) was inconsistent, and he thought that considerable time would elapse before rating could be made uniform or satisfactory. He found that in most districts, the rating of a house was governed by

what happened to be the rental of the adjoining house, with additions or deductions, arising from any difference in structure. In the case of houses in new streets, the Assessment Committees and assessors were all at sea, and their only basis of rating seemed to be what people had been foolish enough to give as ground rents added to interest on outlay. This they call a gross estimated rent, and from it they deduct an arbitrary per-centage of from 5 to 20 per cent., and call that the rateable value. Such a system could not find favour, nor last for the time contemplated by the new Act, viz., five years. With regard to Mr. Squarey's own case, that ought to be put before the Committee of the House of Commons on Local Taxation, now sitting. [Mr. Squarey said he did submit it to them.] It seemed to be the view of that Committee that some of the present and future taxation of the country should be removed from the occupiers and put on the shoulders of the freeholders of the land. Mr. Squarey's case, he thought, proved that the owners of the land, as freeholders, did now bear the brunt of the taxation; though in the case of leases, where arrangements were made between the freeholder and the occupier, the occupier for the time being bore the burdens. Any attempt to put a further burden on the freeholders was most unjust and unfair.

Mr. J. Fisher (Visitor) said that, with respect to the rating of mines, his practice had been to ascertain the productive power of the land, while being exhausted as a coal mine, as a basis for the assessment, in the same way as for brick-earth or gravel; but when it is exhausted, the land reverts to an inferior value. It may be, in some cases, so well preserved that the land is of nearly the same value as it was before it was opened; but while the land

has that extra production in it, the occupier is liable to be assessed on a proportion of the profit that accrues during the time of the occupation. That was a principle which he believed to be uncontroverted. As the profits accrue the liability to assessment occurs; they run together, and when one ceases the other does so. He thought it a fallacy to say that there was any right to an allowance on account of the exhaustion of the soil; it was only a temporary assessment, and the land had to be assessed at as much as it was producing at the time. In his practice, the want of a competent tribunal for the settlement of these questions had much struck him. Assessment Committees differed very much in the views they took of the questions brought before them, and there was very little certainty as to the decisions they came to. He also found that the ultimate tribunal of the Quarter Session was almost as unsatisfactory: considering the power it has, it was almost worse. The courts of Quarter Session differed so much in the views they took, that he thought it extremely desirable that there should be one common tribunal to which mixed questions of law and fact, such as often occurred in matters of rating, should be taken. He would illustrate what he said by mentioning a case within his own experience. He had an appeal before the Sessions, and, in making a claim for deduction in respect of some everyday expense, in the nature of repairs done by the landlord, one of the magistrates said to him, "Do you mean to contend that the landlord's repairs are a deduction from your rent?"—evidently believing the proposition to be a great fallacy, which he could not be expected seriously to entertain. The decision in the case was based upon the view which this magistrate took. He (Mr. Fisher) was quite sure that if the appeal had been heard in an adjoining county, the decision would have been exactly the reverse. A case was refused; so that there

was no opportunity of having what was laid down reviewed. Another fact bearing upon the necessity for such a common tribunal was the unwillingness of Assessment Committees to undertake the full amount of the duties they were appointed to perform. He was a member of the Assessment Committee of the Union in which he resided, and they said, "We are not a body of valuers, we must take for granted what we are told," and they shirked their duty in that way. It must be remembered that an Assessment Committee was nothing more than an aggregation of parish officers, who perform for a Union what overseers perform for a parish; but sometimes, from want of local information, indolence, or other causes, the duties were performed in a very unsatisfactory manner, and he hoped that, before long, officers would be appointed to see that these matters were properly investigated before a competent tribunal.

Mr. C. Cadle (Member) wished to mention that, under the statute of Elizabeth, personal property (in the shape of stock-in-trade, which at that time was almost the only personal property known) as well as real property was rateable; and there was now, he believed, an Act of Parliament passed every year exempting such property from rating. He had experienced some difficulty in dealing with accommodation land and game farms; because, with regard to the former, the Act recites the rating is to be at what the land "would reasonably let for." If a man chose to give an excessive rent for accommodation land, it was not fair that the Assessment Committee should assess him upon that rent,—a tenant at an excessive rent would probably take everything off the land he could, and so impoverish it,—but the rating was to be based on a rent which would admit of the land being kept in a state to command such rent. The same remarks applied to a game farm. If a man gave

10*s.* an acre less rent, because the land was burdened with game, the valuer ought to rate the farm at what it was reasonably worth, and the Assessment Committee had no right to make an allowance in respect of game, but ought to put it at what it is worth to let. Some few years ago the question of not including tithe in the gross estimated rental caused a great stir, and the recent decision of the law officers of the Crown seemed to be a wrong one, because, in valuing land, they must value it at its worth in full, including the tithe, and if any tithe is payable, deduct it. In a field valuation of a parish, if the tithe were not taken into account, injustice must be done to someone; therefore, to make a proper valuation, three columns were required, instead of two, in the valuation book,—the rateable value column, the gross estimated value column, and a third one for the gross estimated rental. What can gross mean, unless it includes everything? Another difficulty was the question of larch plantations. A good deal of larch was grown in Shropshire, and exemption from rating was claimed for it. It seemed, however, to be an injustice to other ratepayers if a field were taken out of rateable occupation thereby. For a few years it might produce little or no income; but, after a time, a large profit accrued to the owner, by the thinning out of the young trees; and, according to recent decisions, such plantations did not come properly under the designation of "saleable underwoods," which were liable to be rated. Perhaps Mr. Ryde would favour the meeting with his experience, with regard to the rating of water-power. He would also call attention to the practice of Assessment Committees in making deductions. The rule was to deduct 10 or 15 per cent. from farms and buildings together; but, if a man happened to have land in one parish and farm buildings in another, he only got 2½ per cent. deducted for the land, and 10 per cent. for the house and

buildings. That was an injustice, for his neighbour would get a deduction of 10 per cent. on both land and buildings when situate in the same parish. What was wanted, was that Boards of Guardians and Assessment Committees should each appoint a surveyor to act on their behalf in these matters; and, until they did so, they would neither satisfy themselves nor the country at large.

Mr. P. D. Tuckett (Member) said that he was much struck with the precision and completeness of the information contained in Mr. Ryde's Paper on almost all the points which they were accustomed to discuss. He had just had an opportunity of looking for a few minutes into Mr. Hedley's pamphlet on the "Rating of Coal Mines," and it seemed to him that Mr. Ryde's statement on that subject, although it might not be very full, agreed substantially in principle with the views expressed more in detail by Mr. Lloyd. He had no doubt that Mr. Ryde, in his reply, would tell them he had not meant to be understood that a coal mine was to be rated upon the actual rent and royalty paid, but upon the rent and royalty which might reasonably be expected to be paid; and those calculations of Mr. Hedley's which Mr. Lloyd pointed to might, he thought, be shortly summed up in two words—as the rent or royalty—(whichever form it took) which could be reasonably realized by the coal mine, deducting a fair allowance for repairs needful to maintain such rent and royalty. There was the rent paid for the mine, and interest on the money expended in sinking the shaft, and on the plant, &c., whether provided by landlord or tenant, which must be taken in the light of rent, and from the total so arrived at a deduction was made on account of repairs, thus coming simply to the established principle of rating for all descriptions of property. With regard to larch plantations he might mention that, some years ago, he

was engaged (in conjunction with another Member of this Institution) in the valuation of the parish of Farnham, where larch was grown to a considerable extent, and cut young for hop poles. It was then considered that, as they did not grow from old stools, these plantations could not be regarded as underwood, and they were not assessed. Care was taken at the time to get the best information as to the then state of the law upon the point, and he did not remember that any decision had since been given altering it; though he knew it was one which had often been a subject of discussion amongst those interested.

Mr. Rex (Associate) asked Mr. Ryde to explain, in his reply, the apparent inconsistency of two paragraphs in his Paper, which were as follows:—On page 263, he said, "The term from year to year must not be misunderstood, as it sometimes is. It does not mean a letting for a year only, nor a letting on a yearly tenancy; but it means that changeable circumstances must be taken into account from year to year as they arise." Then, on page 265, "The gross estimated rental of a house is that rent which a tenant might reasonably be expected to give for the right to occupy it for one year."

Mr. J. W. Penfold (Hon. Sec.), with reference to the schedule of deductions in The Valuation (Metropolis) Act, pointed out that they are put as the *maximum* deductions to be allowed in the several classes of property. There was no reason, therefore, why, in such a case as Mr. Eve mentioned, the proper per-centage should not be taken from the £100 a-year, the value of the structure, and the £400 a year ground rent be left without any deduction whatever. No doubt the practical objection to a schedule of deductions was, that the Assessment Committee applied it by a rule of

thumb, and deducted the given per-centage all round. A competent surveyor would deal with each case on its own circumstances, and if such advice were always obtained there would be no need of the schedule at all. So far as he was able to see, one column for net value ought to serve all purposes. The gross value column seemed to be only for the inhabited house duty, property tax, &c., which it would be much more equitable to assess on the net value. He presumed the Legislature was aiming at such a centralization of assessment and appeal as had been suggested. The Valuation (Metropolis) Act provided that the assessments for all rates and taxes should be from one valuation list, and all appeals be brought to one tribunal. This would get rid of the annoyance and injustice which at present existed of many rates and taxes being assessed on different valuations, with a separate tribunal of appeal to each.

Mr. Eve said that he was aware the scale in the schedule alluded to was that of the *maximum* per-centage, still he had found, in several examples he had worked out, that the margin of deduction for buildings and land produced, in combination, a different result to the margin given for buildings and land separately, and must therefore be incorrect in principle. If there were to be a per-centage at all, it should be calculated on the structural value of buildings, and not include the value of the ground on which they stand.

Mr. E. Ryde, in reply upon the discussion, said that he had expected that the discussion would have assumed more strongly two phases. He had anticipated a discussion on his Paper, and on that more important subject, which was now occupying the attention of a Parliamentary Committee. No speakers, with the exception

of Mr. Smith and Mr. Squarey had touched upon the latter question,—the incidence of rating. He gathered from his remarks that Mr. Smith considered the incidence of local assessment about right where it was. That, as parties have bought land subject to all these charges, there would be considerable injustice if the charges were removed from the land and imposed in other ways; and there was a great deal to be said in favour of that view. Take, for examples, two houses—one at the east and the other at the west end of London. The house at the west end, where the rates were low, would command a larger price than that at the east end, where the burden of rates was greater: therefore, when men talked of equalizing rates, it only meant robbing Peter to pay Paul. The real question which presented itself was—Should the owners of landed property be called upon to bear almost exclusively the burden of local taxation? It seemed to be in the minds of the Committee now sitting, that part of the burden should be put upon the landlord for the relief of the tenant. But the landlord bore it all now. It was quite clear, if a farm were worth £100 a-year, and the taxation were £20, it is worth £120 as against the tenant. If the taxation were only £10, he would be bound by competition to give £110 a-year rent; so that rent and rates constitute the value of the farm: and if the landlord did not bear the local taxation he would get the gross value in rent.

It might fairly be argued that portions, at all events, of the local taxes should no longer fall upon the real property of the district. For instance, when the burden of repairing the highways was first put upon real property, the owners and occupiers of land made the most use of the highways. But now it often happened that a man who was worth £200,000, without possessing an acre of

land, made as much use of the roads as the owners of real property, without being called upon to contribute towards their maintenance. This would not be the case if the repair of the highways were made an imperial tax.

The remainder of Mr. Smith's speech had reference to the intention of the Legislature with regard to the mode of filling up the gross column of the assessment. Whatever that intention might have been, the practice had obtained, long before the date of the opinion of Sir Fitzroy Kelly and Sir Hugh Cairns, of dealing with the gross column as we do now, by omitting the addition to it of the rates and taxes. With respect to the remarks of Mr. Squarey, who had informed them that he formerly paid £75 a-year for rates in respect of a farm which he held at a rental of £1,300, he must express his surprise at the smallness of the amount; for it was little more than a shilling in the pound. He thought that what Mr. Squarey had said would go far to substantiate his view that the landlord actually pays the rates. Mr. Squarey's words were—"When my rates were £75, my farm was worth £1,300 a-year. Make my rates £180, and my farm is not worth so much by the difference between £75 and £180." In effect, he would not have given so much for the farm if he knew the rates would have amounted to £180. That agreed precisely with what he (Mr. Ryde) had said, that the rent and the rates together made up the real value. But a tenant in taking his farm was bound to calculate on having to pay the *proper and usual* tenant's rates and taxes; and, therefore, if his farm were rated exceptionally low, he must not complain of excessive rent if, after that rent had been fixed, the rating was raised to a par with the rest of the Union.

Mr. Squarey reminded his friend that he stated his parish was a close parish, and that no other person was rated in the parish. The Union Chargeability Act was that which raised the rates on his farm.

He (Mr. Ryde) now came to the speech of Mr. Lloyd, who had objected that he had not gone sufficiently into the question of the rating of coal mines. His general answer was, that in consequence of the length of his Paper, he had been induced to treat that branch of the subject as concisely as he could. But, shortly as he had treated it, he believed that he had included the whole of the liabilities connected with that class of ratings; and, though he had not read Mr. Hedley's pamphlet, to which Mr. Lloyd had referred, yet looking through it cursorily, he saw nothing in it at variance with what he had said in his Paper. Mr. Lloyd represented him as saying that the rent and royalty actually paid to the landlord constituted the rateable value of the mine. That was a misapprehension. However badly he might have expressed himself, there would be found in his Paper, this paragraph as a safety-valve,—"It must always be borne in mind that the rateable value is not the actual rent at which a property may be let, but that rent at which, after taking all things into consideration, it might reasonably be expected to let." What he meant was, that the reasonable rent and royalty at the time the valuation was made was the rateable value. If money had to be expended upon the mine to make it productive, that must be taken into consideration; and they could not rate the coal mine till there was a beneficial occupation in it. It does not matter by whom the expenditure is made, whether by the landlord or the tenant,—that becomes a transaction between landlord and tenant,—if the

latter has to make the outlay, he will not pay so much rent; but the rateable value remains the same. He had quoted a judgment by Lord DENMAN (p. 263) to the effect that the rateable value was the royalty which it might be reasonable, at the beginning of a year, to expect that a tenant would be able to pay, and not the royalty, which, at the end of the year, experience had proved he could pay. But, notwithstanding that judgment, he (Mr. RYDE) apprehended that there was nothing to prevent the experience of a past year being taken as a guide to the assessment for another year.

He quite agreed with Mr. EVE that deductions based on a schedule of per-centage were entirely wrong in principle. Take the case of an old wooden house for which a man gives £50 a year; it would constantly need repairs; the 10 or 20 per cent. deduction would be totally insufficient, and it might even be that the expenses of repairs amounted to as much as the whole rent. Take the case on the contrary of a new brick building, in respect of which the same deduction is made for repairs; it becomes much more than sufficient for the purpose. He did not agree with Mr PENFOLD that any surveyor or rating committee would in practice make less than the *maximum* allowance for repairs, set forth by the Act of Parliament. He quite coincided in the opinion that some of the tribunals to whom appeals were made knew little about rating, and that there was very great variation in their practice. A new tribunal had just been created within the Metropolitan area; how that would act they had yet to learn. Practically, a great deal would depend on the chairman; but they must not expect that he would always decide as they individually wished him to do.

The mode of rating coal mines in South Wales had been explained by Mr. FISHER, who laid down the principle as an incontrovertible one that coal mines should be rated

according to their production of profit. He (Mr. Ryde) considered that to be an erroneous principle. The question was what might the tenant be reasonably expected to give for the mine; and though the tenant paid a fixed rent, and the rest in the shape of a royalty, they had still to ascertain what he might reasonably be expected to pay, and put that as the rateable value. If it were in a state that no tenant would pay rent for it, there could be no rateable value; but the reasonable rent which a tenant would pay was that which was to be assessed. When the coal was all gone it ceased to be rated as a coal mine, and this applied also to a brick field or a stone quarry.

It had been said by Mr. Cadle that a man paying an unreasonable rent ought not to be rated upon that rent, and he quite agreed with him. He might give three times the value of the land, but that was not the rateable value. Nevertheless, they must not assume that a man rented accommodation land at the same price as land which formed part of a farm.

The word "reasonable" must be kept in mind throughout the whole question.

With regard to water-power, it was the additional rent which a property would let for with that advantage, above that for which it would let without it, which was to be rated.

Mr. Lloyd: Supposing that the power has not been used, but exists, and is potential. Assume that you have a property on a stream of water in a manufacturing district, which might come into use for water-power. Does that, in your opinion, enhance the value of the property?

Mr. Ryde: It does not become rateable until it is brought into use.

With reference to larch plantations, where they were

planted for hop poles, it was not the practice to rate them, as they are not considered to come under the designation of "saleable underwoods."

Mr. Cadle remarked that the thinnings of the trees, necessary for the growth of those which remained, were disposed of, and yielded profit to the owner.

Mr. Lloyd: Supposing you get, not an annual but an accommodation profit, does not that enhance the value of the property?

Mr. Ryde said that timber was not rateable. In the case of cutting poles he believed there had been no decision. They were not "saleable underwoods."

He had now only to say a word as to what fell from Mr. Rex, with respect to what he considered an inconsistency between two paragraphs of his Paper. In no part of the Paper was it stated, that the rateable value was the rent which a tenant might be expected to pay for one year's occupation only. "No man would rent a railway and stock it for one year's occupation." That was not what was meant, but that they were to take the property at the rent it might reasonably be expected to produce in the year; assuming that the rate was going to be adjusted from year to year according to circumstances. By a parity of reasoning no man would take a large mansion and furnish it for one year. Assume there was to be a gradually increasing value, with or without a lease, that a house was worth £100 the first year, £200 the next, and £600 the next, they had to take into account in each year the special circumstances of that year.

He concurred with Mr. Penfold that the house duty and other taxes would be better taken on the net value

than on the gross. If a man had £100 a-year from land, with no outgoings, he was assessed £100 a-year to the property tax; if he had £100 a-year from cottages he was still rated at £100, though he had to spend £20 or £30 for repairs.

With regard to game farms, he considered that he had treated the subject very fully in his Paper.

The PRESIDENT (in closing the discussion) said that he understood the Act of Elizabeth, in exempting timber from rating, applied only to oak, ash, and elm timber. And, with regard to other plantations, he had always paid rates upon plantations when profit was derived from them. It might be wrong, but that was his experience.

With reference to Assessment Committees, many years ago, being in Ireland on a Drainage Commission, he spent a considerable time with the head of the Valuation Department, and he became so impressed with the importance of having a central control over that class of assessment, he was satisfied that without a controlling body of the kind the assessment in this country would never be equal. He had, on one occasion, the task of looking through the whole assessments of the county of Norfolk, for militia rate purposes, and he found that the assessment varied between half the annual value and an excess of the annual value. He found, however, that the farms were almost universally under-rated, while the houses in the towns were over-rated. He was convinced, as he had already said, until they got a central body, and the assessments were made by competent surveyors, it would be in vain to look for equitable assessment in this country. These Assessment Committees were almost entirely controlled by rent. In one case, he found a farm was let to a tenant, subject to the tenant paying all charges, including repairs and materials for the same; in another,

the landlord found all materials and labour; and these instances were treated in the rating as being equal. The heavy burdens upon land have made it the more important that property should be equitably rated. He did not say he thought the land should bear the whole burden, it was now so large and important a question that other property should bear a portion of those burdens which were made for general purposes, and not as pertinent to the land only. He did not think there could be a doubt on the mind of anybody that the landlord bore the whole charge: For, what was rent? It was the residue after all charges were paid. Therefore, in fact, the landlord did pay all charges. It was true that, as lessee, the tenant might hold part of the fee, and that was the only conflict about the rating of coal mines. It seemed to him that the man who took the original lease, with covenants that he shall lay out a considerable sum of money, should not be rated at the amount he paid, but at the price at which it would let in the position in which the property was then found.

With regard to the Metropolitan Assessment Act, it struck him that the scale of maximum deductions fixed by that Act, was put in to limit the power of the Assessment Committees who made the valuations, so that they might not take off a larger amount than ought fairly to be deducted. If there had been a central control, no such limitation would have been placed in that Act of Parliament.

He had been asked to give evidence before the Committee now sitting, because he was supposed to have a leaning in favour of a part of the burdens being placed upon the landlords. Having lived for three or four years in Scotland, he found that in the country districts the landlords paid a proportion of the rates, and were represented upon the Boards of Guardians and on other local bodies; and it did seem to him that the working of the system in Scot-

land was good. He did not think it mattered materially who, in the first place, paid the rates. Boards of Guardians there could be no doubt were, for the most part, composed of occupiers, and their meetings might be attended by magistrates *ex-officio,* but because they had no position there they very rarely attended, unless they had some specific duty to perform. He thought there was some difficulty in the suggestion that the landlord should pay part of the rates in towns, and he confessed he was not prepared to go the length in that respect at which the Committee appeared to be aiming.

With regard to farms damaged by game, he confessed it seemed to him an anomaly that a farm burdened with game, of which the owner received the benefit in one way or another, should be rated lower than one on which the game was not made a matter of consideration; there was a beneficial occupation in the game, and the two farms ought to be similarly rated; although the one might not command so high a rent per acre as the other.

The meeting then adjourned.

No. 17.]

NOTES ON THE INCLOSURE ACTS AND THEIR RESULTS.

By RICHARD HALL, Vice-President.

Read at the Ordinary General Meeting of the Institution of Surveyors, *May 23rd*, 1870.

JOHN CLUTTON, PRESIDENT, IN THE CHAIR.

In the following notes I do not propose to trace the history of inclosures back to any remote period, but rather to dwell upon the more recent Acts of Parliament relating to the subject, and the improvements and advantages which have resulted from inclosures carried out under my own observation, and within my own recollection.

Without entering into any description of the numerous rights over lands to which the Inclosure Acts apply, the bulk of such lands may be briefly described as wastes of manors, or as commonable lands which are held in severalty during certain seasons, and are at other times subject to the exercise of various common rights.

It is hardly necessary to point out that such lands must be very much more valuable to the various persons interested in them, when the rights of such persons have been ascertained and commuted into the form of an allotment, held in severalty, or, in other words, when they have been inclosed and allotted.

Inclosures have been effected, either by means of an agreement between the lord of the manor and the commoners, or by an Act of Parliament. The first process has seldom been resorted to, on account of the difficulty in obtaining the unanimous consent of the parties, and also because it must generally happen, that some of them are unable to give a legally binding consent. The other process has therefore been more generally adopted, and up to the beginning of this century about 1,600 private Acts for Inclosures had been passed.

The cost of each Act, and of the machinery for putting it into execution, was so great, that, in the year 1800, the attention of Parliament was directed to the subject, and a series of resolutions agreed to by both Houses.

By these resolutions it was proposed that affidavits to prove the notices, consents, and allegations, contained in the preambles of Inclosure Bills, should be admitted instead of parole evidence; that a general law, containing provisions to which all Inclosure Bills might refer, should be passed, and a similar law for taxing solicitors' charges, regulating the conduct of commissioners, and preventing delays; and that the fees payable to the Houses of Parliament, on the various stages of private Bills, should be reduced.

In the next session (1801) a Bill was introduced into the House of Lords, and another into the House of Commons, and the latter, which was brought in by Sir John Sinclair, was passed.

It was entitled, "An Act for consolidating in one Act certain provisions usually inserted in Acts of Inclosure, and for facilitating the mode of proving the several facts usually required on the passing of such Acts" (41 Geo. III., cap. 109). The preamble set forth that its object was to reduce the expenses of passing Inclosure Acts, and the

clauses provided for the appointment of commissioners, and the performance, by them, of the various duties necessary to carry such acts into execution.

By this measure, affidavits were substituted for parole evidence, and general clauses were provided to which Private Bills should refer; the Act, however, established no control over the proceedings, or the costs and delays, of inclosures, which appeared to be one of the chief objects of the resolutions. It is curious to observe that, in the Bill which was introduced into the House of Lords, this important point was not lost sight of, as a Board of Commissioners was proposed to superintend and control inclosures.

The General Inclosure Act was a step in the right direction; but, as in every individual case, a special Act was still necessary, the expense was in most instances very great, and entirely prevented the inclosure of the smaller and less valuable commons.

The fees, although reduced in accordance with the resolutions, were seldom less than £250 or £300, exclusive of the solicitors' and parliamentary agents' costs for obtaining and proving the assents and dissents, and promoting the Bill. Thus from £500 to £1,000, and, in opposed cases, sometimes as much as £1,700, were frequently expended before the actual business of the inclosure began. From this cause the inclosure of many commons, although approved by the majority of those interested, was prevented by the fear that some litigious person might, at the last moment, get up an opposition to the Bill, which would materially increase its cost.

It had been found somewhat difficult to substantiate appeals against the awards made under Inclosure Acts, and it was, therefore, customary, in order to satisfy the three principal interests involved, viz., those of the lord, the

tithe-owner, and the commoners, that each should name a commissioner. This custom tended very much to increase the cost, as one commissioner might have performed the duties alone.

The numerous inclosures carried out during the early part of this century were mostly those of open common fields, and the more valuable commons. The price of corn and the value of land was then very high, and the expenses were, therefore, of less consequence than they became when those prices fell.

In looking over the papers referring to inclosures in which my father acted, either as commissioner or surveyor, from the beginning of the century up to the year 1815, and also some in which I was engaged before the year 1836, I find that the cost of dealing with some 17,000 acres, in twenty-two cases, averaged nearly £3 per acre.

These were, with two exceptions, inclosures of common fields, and in every case a considerable quantity of land was dealt with. The costs may be approximately divided into three equal parts, viz.:

The Act of Parliament and solicitors' costs	£1 per acre.
Roads and fencing	£1 „
Commissioner, surveyor, and other expenses	£1 „

Inclosures of waste lands were generally more expensive, the costs averaging, in ordinary cases, from £4 to £6 per acre; and in those of small commons considerably more.

In the evidence before the Select Committee of 1844, the Chamford Forest Inclosure, on which £70,000 were expended to inclose 12,000 acres, was alluded to. In another case, an opposed Bill to deal with 2,000 acres cost £1,728, and the whole expense, including that item, was £8,128.

One thousand pounds were spent in a case of 85 acres of valuable waste land, of which sum £337 was the cost of the Act.

It was, therefore, impossible to inclose small commons, unless they were very valuable; and, as the late Mr. Blamire observed in his evidence before the same Committee, there were, doubtless, instances in which not only had the whole of the land been sold to pay the expenses, but the persons interested, had, in addition, saddled themselves with the repairs of expensive roads.

The want of some controlling power was much felt. In numerous cases the process dragged on for years, and in others, from some difficulty which arose in the course of the proceedings, no award was ever made, and the allottees consequently possessed no title to their allotments. The late Mr. Blamire stated that he had heard of 100 such cases. One, affecting some 40,000 acres, was particularly alluded to, which, though commenced at the beginning of the century, had never been completed. The neglect of forms, also, rendered the legality of many awards doubtful.

In the year 1821 a short Act (1 & 2 Geo. IV., cap. 23) was passed, mainly for the purpose of enabling allottees to recover the rent of and protect their allotments, although the award of the commissioners should not have been completed; and in 1833 two Acts were passed,—one (3 & 4 Wm. IV., cap. 35) providing for the recovery by the commissioners of rates which might be made after the completion of their awards, and the other (3 & 4 Wm. IV., cap. 87) to render such awards legal, although they had not been properly enrolled according to the statute.

We then come to the year 1836, when Mr. Anderson Pelham (afterwards Lord Worsley) introduced a Bill to facilitate the inclosure of common fields, and render the process less expensive. It received the royal assent in the

same year, after some considerable discussion, and is known as The Common Field Inclosure Act (6 & 7 Wm. IV., cap. 115). Its main object was to obviate the necessity of a special Act in each case; and it provided that two third parts, both in number and value, of the persons interested in any common arable field, or common meadow, might consent in writing to an inclosure, at a meeting to be called for the purpose of considering the matter, and at a subsequent meeting appoint a sole commissioner, or two commissioners with an umpire, to carry it out. It also provided for inclosures without a commissioner, if seven-eighths in number and value of the persons interested entered into an agreement for the purpose at a public meeting, such agreement to be subject to final appeal to the Quarter Sessions within six months.

The commissioner having been appointed, proceeded, with the assistance of a clerk, to hold meetings to receive and determine the claims, and afterwards to set out the roads, make the allotments, and draw up the award. He had power to straighten and shorten boundaries, and could, with the consent of the lords of neighbouring manors, set out the boundaries between them and the lands to be inclosed. Four-fifths of the persons interested could, at a meeting, agree on the adoption of any map to be used for the purposes of the inclosure, and give special instructions to the commissioner. These proceedings were all subject to appeals either to the Quarter Sessions or the courts of law.

This Act did not authorize the inclosure of any waste land, and it was not to affect the rights of lords of manors, except in respect of anything for which compensation was made.

It is somewhat curious that the provision, for the protec-

tion of the smaller proprietors, enacting that the fixed proportion in *number*, as well as in value, of the persons interested, should determine on the inclosure, was introduced by the House of Lords, who also inserted the clause preventing the application of the Act to land within certain distances of large towns.

There were, however, many objections to the Act of 1836, of which, perhaps, the chief was that it omitted to deal with waste land. This circumstance occasioned much inconvenience, because small pieces of waste were frequently found intermixed with open common fields. In many instances these were actually dealt with, thus placing in jeopardy the legality of the award and the title of the allottees. Mr. Higgins, in his evidence before the Committee in 1844, mentioned an inclosure under the Act, in which he had been requested to inclose such a piece of land together with the common fields, and had been indemnified by the persons interested for carrying out their wishes. The Act could not be applied to the cases of common fields, over which general and unlimited rights of pasturage by the inhabitants of a town, or by the householders in common with the owners, existed, because it was held that a legal title to such rights could not be shown, and that they were only exercised by usage. Such a case existed at Newbury, which it was found could not be dealt with under the Common Fields' Act.

On reference to nine cases under the Act of 1836, in which I acted as commissioner, between the years 1836 and 1844, I find that about £10,500 were expended to inclose 5,500 acres, or about £2 per acre, one-half of which was the cost of the new roads.

From the date of the passing of the Act of 1801, up to 1836, about 1,920 private Acts had received the royal

assent; but from 1836 to 1843 scarcely 100 such Acts were passed.

In the year 1840 another short Act was passed (3 & 4 Vic., cap. 31), to render the execution of awards by the commissioners conclusive evidence that the provisions of the Acts had been complied with, so as to establish the title of the allottees.

It provided that persons proceeding to inclose and cultivate their allotments should be considered to have waived their right to appeal, and extended the powers as to setting out boundaries. It also provided for the inclosures, under the Act of 1836, of tracts of grass land commonable during part of the year only, and held in severalty for the remainder, in cases in which such tracts were adjacent to common arable fields.

For several years before 1843 the Tithe Commissioners had been carrying out the duties entrusted to them by the Legislature, and the success which attended their labours, probably suggested the idea of a somewhat similar controlling power to superintend inclosures.

In 1843, Lord Worsley introduced a measure with this view, but it advanced no farther than a second reading. Previous to this year, the question of dedicating portions of waste land for recreation grounds for the inhabitants had received consideration, and a regulation to this effect had become one of the standing orders of the House of Commons. In the debates on Lord Worsley's Bill, this subject, and also that of allotment gardens were discussed, and the measure encountered some opposition, on the ground of the undesirability of depriving the public, and especially the poorer inhabitants, of the advantages of commons near their dwellings.

In the next session, 1844, Lord Worsley again brought

in a Bill, which was eventually referred to the Select Committee to which I have several times alluded. Their report was not complete until the end of the session. It set forth that a large extent of waste land in the kingdom was capable of profitable cultivation, and that it was in some localities a source of injury and inconvenience to the neighbourhood, by its effect upon the character of the population. It referred to the impediment to inclosures caused by the great expense, and, in some cases, the uncertainty of procuring private Acts, and also to the fact that the Legislature had repeatedly admitted the principle and advantage of affording facilities for the inclosure of waste lands. It was pointed out that the time was favourable for a general measure—first, because the lands to be dealt with would, by the operation of the Tithe Act, be freed from future liability to tithes; secondly, because of the improved means of draining and manuring such lands at a moderate cost; and, thirdly, because the tithe maps and valuation might be rendered available. It suggested that the Act of 1836 might be altered advantageously, especially with the view of diminishing expense, and remarked on the inconvenience of the occupation of intermixed lands, and the good which would accrue by affording increased facilities for their exchange. After alluding to the inconvenience, which had resulted from the imperfect execution of the powers given to commissioners, the report concluded by stating, that it appeared to be practicable and expedient that a general Act, entrusting the control of inclosures to a central Board, should be passed, but that each inclosure ought to be authorized by Parliament.

In the session of 1845, the government of Sir Robert Peel, acting partly on the recommendations of the report to which I have just referred, carried The General Inclosure

Act, establishing the Inclosure Commission for England and Wales. This Act has been supplemented by eight Amendment Acts—passed, respectively, in the years 1846, 1847, 1848, 1849, 1852, 1854, 1857, and 1859 (8 & 9 Vic., cap. 118; 9 & 10 Vic,, cap. 70; 10 & 11 Vic., cap. 111; 11 & 12 Vic., cap. 99; 12 & 13 Vic., cap. 83; 15 & 16 Vic., cap. 79; 17 & 18 Vic., cap. 97; 20 & 21 Vic., cap. 31; 22 & 23 Vic., cap. 43). The original measure authorized the commissioners to carry out the inclosure of commonable lands, and only required that the further sanction of Parliament should be obtained in the cases of waste or common land subject to rights at all times of the year, without limit. The fifth Amendment Act, however, provided that no land should be inclosed under the Inclosure Acts without Parliamentary authority.

The process of inclosure, under these Acts, may be thus briefly described. One-third part, in value, of the persons interested, sign and forward to the Inclosure Commissioners an application (the form of which is obtained at their office), and provided the lord of the manor also consents, in cases where he is entitled to the soil, an assistant-commissioner is sent down, who inspects the land, inquires into the circumstances and expediency of the proposed inclosure, and holds a meeting for the purpose of hearing any objections. The assistant-commissioner is directed to ascertain, if it be necessary that any special protection should be provided for public interests or mineral property, and, in the case of common or waste land, whether allotments for exercise and recreation and for the labouring poor shall be set out, in order that special conditions with regard to these matters may be inserted in the provisional order. He then reports to the commissioners, who, if they approve the inclosure, make a provi-

sional order, in which they state the proportion to be given to the lord of the manor, and set out the special conditions. This order is deposited in the parish, and the assistant-commissioner then holds another meeting to take the assents and dissents; and if he is satisfied that two-thirds parts of those interested, in value, consent, the commissioners certify the expediency of the inclosure in their Annual General Report to the Secretary of State.

A Bill is then brought into Parliament to sanction the various inclosures certified by the commissioners; and, as this Sessional Act is a Public Act, it entails no expense on the persons interested.

After the Act is obtained, the commissioners call a meeting to choose a valuer, to carry out the inclosure under their directions; but if a majority of the persons interested, both in number and value, cannot agree on the choice, the appointment falls to the commissioners. At this meeting, a similar majority may agree on instructions to be given to the valuer as to setting out of land for various public purposes, for formation of drains, embankments, &c., the use of plans already in existence, the manner in which the expenses are to be defrayed, &c., &c. The valuer receives the claims, and after they have been deposited for inspection, holds a meeting to hear objections and determines the same, subject to appeal to the commissioners, and from their decision to the Law Courts. He then prepares the plan, ascertains the value of the several interests involved, makes any necessary roads or stops up useless ones, and eventually sets out the allotments and draws up a report with a plan attached. This report is examined by the commissioners and deposited in the parish to be inspected by the persons interested, and, after notice, an assistant-commissioner holds a meeting to hear objections which are determined by the

commissioners. The award is then engrossed, signed and confirmed by the commissioners, and the inclosure is rendered complete.

Apart from the agricultural question, the Committee of 1844 considered that the existence of commons nurtured a class of idle persons on their borders, who were frequently concerned in various illegal acts; they therefore reported that the character of the population would be improved by inclosures. They also thought that the poorer inhabitants would be much benefited by reason of the increased labour which would be required to fence, drain, and cultivate the lands dealt with. In the debate on the Bill, in 1845, however, the opposition was principally on the ground that the small occupiers and poor people would suffer.

There is no doubt that the process of inclosure sometimes deprives this class of persons of some advantages, and it is difficult to compensate them by the small allotments to which they become entitled; the Acts, however, particularly direct that small proprietors shall be specially considered, and the provision rendering it impossible to inclose village greens, as also the allotments for the labouring poor and for recreation, testify to the consideration which has been given to the subject by Parliament. When a special Act was passed, a poor man had no chance of protecting his interests, because of the expense which such a proceeding involved; under the present system, however, he has the opportunity of appealing to the assistant-commissioner on the spot.

The Acts provide for the completion and confirmation of incomplete inclosures under former Acts, and also empower the commissioners to carry out exchanges quite independently of inclosures. This latter process, which avoids the necessity of any investigation of title, is very inexpensive, and has been most extensively adopted; and

in the Twenty-fifth Annual Report of the Commissioners, published this year, it will be observed that no fewer than 3,676 such exchanges have been confirmed.

The labours of the Inclosure Commissioners have been attended with great success, and in their report which has just been referred to, it appears that 843 inclosures, dealing with 531,000 acres, have already been confirmed, whilst 149 are in progress for the purpose of inclosing 120,000 acres. They also state that the expenses incurred by their office, and repaid by the parties interested, up to the time of the introduction of the annual bill, have only averaged £15 19*s.* 6*d.* in each case.

The subsequent expenses vary, but they are very much less than formerly, if the cost of new roads is moderate. In instances in which I have acted as valuer, the costs have been as follows:—

Two common field inclosures—	
Quantity	667 acres.
Cost of roads, about . . .	18*s.* per acre.
Other expenses	15*s.* do.
Six waste land inclosures—	
Quantity	2,523 acres.
Cost of roads	33*s.* per acre.
Other expenses	30*s.* do.

In the latter series I have omitted some heavy legal costs in the case of one small inclosure, which though defrayed out of the funds raised, were quite exceptional.

The general cost of the inclosure of waste lands, as shown by these figures, is somewhat high; but the fact that some of the commons were extremely small, must be taken into account. In each of three cases, less than fifty acres were dealt with.

I may, perhaps, here refer to the subject of the width of turnpike roads, which is dependent on The General Turnpike Act, 3 George IV., cap. 126. This statute provides, that across waste land, no fence or building shall be placed within 25 feet of the centre of the road, or if within three miles of a market town, within 30 feet. Thus, a road 50 feet wide must be set out even in agricultural districts, not only involving a great waste of land but a considerable inconvenience and nuisance, and, practically, leaving a large tract of waste still uninclosed. The trustees very frequently consent to a lesser width, but they are not obliged to do so; if they refuse, The Turnpike Act must be complied with.

From the sketch of the legislation on this important subject up to this point, it will be seen that Parliament has fully recognized the great advantage of inclosing wastes and unprofitable land, and removing any rights that interfere with its free cultivation. From time to time, however, provisions have been inserted in the various Acts, in order to preserve open spaces for the public, and for large populations. Village greens cannot be inclosed, and recreation grounds and allotments for the poor may be set out, if necessary, in the cases of inclosures of waste land. Any proposals for dealing with commons near London, or other large towns, have been regarded by Parliament with great jealousy, and in the year 1865, a Committee of the House of Commons reported on the best method of preserving to the public open spaces in and around the metropolis.

Their attention was directed to the question of the inclosure of portions of commons by "approvement." This process is authorized by an old Act of Parliament, passed in the reign of Henry III., (20 Henry III., cap. 4), and known as the statute of Merton. It was intended

to enable the lords of manors to inclose (probably for the purpose of improvement or cultivation) such portions of the waste as were in excess of the requirements of the commoners. The Committee recommended, amongst other things, that this statute should be repealed, at all events so far as suburban commons were concerned.

In the following session, 1866, an Act was passed for the purpose of preventing the inclosure of commons, under the Inclosure Acts, within the Metropolitan Police District (29 & 30 Vic., cap. 122). This measure also provides a machinery to enable persons interested in such commons to apply to the commissioners to prepare schemes for their management, which, after the observance of certain forms, are to be submitted for parliamentary sanction. By the commissioners' report this year, it appears that applications have been made to them in eight cases, but no scheme has yet been completed.

In the present session, a Bill has been introduced to extend the provisions of the Act of 1866 to commons within certain distances of towns containing 5,000 inhabitants and upwards.

Last year, a Committee reported on the subject of the Public Recreation Grounds and Allotment Gardens, set out under the Inclosure Acts, and suggested some alterations in those Acts, with a view to enlarging the powers of the commissioners. This session, the government has introduced a Bill, proposing that as much as one-tenth part of the whole value of any waste land shall be appropriated for these purposes; and giving the commissioners power to reserve a recreation allotment in the cases of common field inclosures, if the public have been in the habit of using any portion of the land to be dealt with for such a purpose. Common fields have hitherto been exempt from this con-

dition. Rides and drives for the public may also be set out, and the assent of the local authority is required before any land can be inclosed within certain specified distances of towns containing 2,500 inhabitants and upwards.

Provision is also made for posting the notices of meetings in a greater number of places, and for distributing them as handbills, in order to give them greater publicity. It is further proposed that the valuer shall send all the claims and objections to the Inclosure Commissioners, who will fix the meeting for hearing and determining the same, and direct the attendance of an assistant-commissioner, as assessor, if they think fit.

The beneficial effects which have resulted from inclosures can hardly be estimated too highly. In the cases of common fields, the removal of the complicated rights and customs, which so much interfered with their profitable cultivation, has increased their value in a very great degree; it has also enabled the owners to effect operations of improvement, such as drainage; and the new roads which have been constructed, have not only benefited the land dealt with, but afforded improved communication for the public and the neighbourhood.

I have frequently had occasion to make valuations in parishes inclosed by my father thirty or forty years previously, and have found the value four or five times as great as it was at the time of the inclosure. But land is not only improved from an agricultural point of view; it is frequently converted into building sites; and some inclosures of common fields, which I carried out in the neighbourhood of Cheltenham, may be referred to as instances in which, probably, the value has been increased tenfold. I remember a small common field property which was looked upon as of so little value that it was left quite uncultivated, and hardly pos-

sessed an owner; the process of inclosure soon changed its character, and since that time it has been built over.

The inclosures of waste lands have also exhibited very interesting results. At Framfield, Sussex, the quantity dealt with was 2,000 acres, and the lands in respect of which rights of common were exercised, extended into seven parishes, and comprised some 12,000 acres. It was very generally thought in the neighbourhood, that the value of the whole of the waste would hardly suffice to pay the expenses. The results were however satisfactory, for the portions sold to defray the expenses did not exceed one-eighth of the whole. Some of the land was comparatively worthless, but the prices obtained averaged about £20 an acre, which was but little less than the price at which inclosed land had been selling.

I will not, however, weary you with instances of the improvements which are so generally familiar to us. Many Members of this Institution, can, no doubt, call to mind interesting cases. It is satisfactory that in no single case within my own experience has the cost been so great as to render the inclosure unprofitable.

In reviewing this brief sketch, it appears that the working of the Inclosure Acts, under the superintendence of the Inclosure Commissioners, has very successfully carried out the intentions of the Legislature. The cost of inclosures has, probably, been reduced by as much as 50 per cent.; at the same time, the process has been accelerated and rendered uniform and certain. The interests of the public, as well as those of the poor inhabitants, have received their share of attention, and present legislation is apparently tending towards the encouragement of the inclosure of rural commons, whilst it seeks to preserve open spaces for the recreation of large populations.

Mr. W. Brown (Member) was sure that every one present would feel greatly indebted to Mr. Hall for the able manner in which he had brought the subject before the Meeting. His object in rising was to call attention to the way in which the expenses (or, as they were termed, the office fees,) attending inclosures and exchanges had gradually increased. In the original Acts referred to, nearly all the documents were free from stamp duty; but, after a time, it was contended that the landowners ought to bear, not only the expenses, but an extra charge in the shape of certain stamps not used heretofore. That was mainly brought about by Mr. Goldney. The increased expenses were not a matter of so much consideration in the case of inclosures, but in exchanges of land they often formed a considerable proportion of the total costs. He believed that still further changes were in contemplation, inasmuch as there was a Bill in the House of Commons to alter entirely the stamps on valuations, making the amount progressive (sixpence for every £10 without limit), instead of being limited to a £1 stamp, as at present, whatever the value might be. The alteration would lead, he feared, to a great deal of discontent. If the proposed scheme were carried out, surveyors in the country would be subjected to much inconvenience, for they would be under the necessity of sending their valuations to Somerset House to be stamped, as stamps of the requisite amount would not be procurable in a country town.

Mr. G. Westbury (Member) did not see why there should be exemption from stamp duty in these inclosure and exchange transactions. Formerly, inclosures and exchanges could only be carried out at great expense; but, under the present system, the charges were not very burden-

some. He remembered a case in his early days in which the principal owner of sixty acres of down land wished to have it inclosed; but there were two or three small proprietors who had rights over it, and the inclosure could not be effected without an Act of Parliament. The result was that it cost £600 to obtain the Act before allotment could be given to the parties for their rights. He felt that land and tithe-owners and others, who wished to effect exchanges, had, by means of the Inclosure Acts, received great benefits, and that the general public ought not to be called upon to pay the cost. He did not believe that the charges for stamp duties were so onerous as to check a single exchange; and thought that the expenses incurred by the imposition of these stamps would be cheerfully paid.

Mr. E. Ryde (Member), after proposing a vote of thanks to the author of the Paper, said that, with regard to the remarks which had been made, it appeared to him that the expense of inclosing land was insignificant compared with the increased value of the land acquired thereby. He was not prepared to say what the expense was; but, probably, it might be taken as ranging from £3 to £6 per acre. The cost in respect of roads depended, first, upon the necessity for new roads, and, secondly, upon the cost of the material to make them with, which, in some cases, was expensive, and in others, cost nothing beyond the labour. Land which had been inclosed in the vicinity of London was now worth £400 or £500 per acre. Weybridge Common was an instance in which the value of the land was largely increased by inclosure; and a large estate, forming part of what used to be Walton Common, had been recently sold for £130 or £140 per acre. The expense in those cases might be left out of the question altogether. He did not consider that

there was likely to be any practical difficulty, such as Mr. Brown anticipated, in these days of railways and telegraphs, in procuring the stamps necessary under the new Act. The advantages of the exchange provisions of the Act, especially in the case of parties under disability, were, undoubtedly, very great. He felt that, in many cases of small inclosures, such as common fields of 20 or 30 acres, the expenses were almost prohibitory; and he thought it would be very desirable and possible that a provision should be inserted in a general Act by which these small inclosures —desirable in themselves—could be effected with less expense than at present.

Mr. J. H. Lloyd (Associate of Council) had great pleasure in seconding the vote of thanks to Mr. Hall, whose Paper he considered to be exceedingly valuable. It was one of a series of Papers which he was glad to see amongst their *Transactions,* which gave the history and effect of legislation, on subjects specially affecting the interests of this Institution, in a convenient and practical shape. He would take this opportunity of saying that, looking back to the two years of their existence, the Institution had reason to congratulate itself upon the large amount of useful information which had been collected and put into a printed form during that period, and which would always be valuable for reference. He thought that they were under great obligations to the gentlemen who had made those contributions. The summary of legislation on the subject before them was, he believed, quite accurate.

Mr. G. Chapman (Member) said that, in agricultural districts, to which his experience of inclosures was chiefly confined, the expense amounted, generally, to about £2 per acre; but their effect had been to double the value of the

land. In some allotments which he set out as recreation grounds, the land was afterwards let by auction at £2 per acre. The only objection he had felt to the operation of the Act was that, in many instances, poor people in the neighbourhood of forests, where they had common rights to turn out a cow or a horse, were deprived of that right,—the chief reason for the deprivation being that the right was not continuously exercised; it appeared to him to be harsh treatment of a poor man, who had the misfortune for one year to lose his cow, to deprive him on any such grounds, of the rights which his forefathers had enjoyed for a great many years. In many cases within his experience these claims had been allowed by the owners; but, whenever they had been disputed, they were thrown over. In dealing with these common rights, a rough kind of justice had been recognized in cases in which he had been employed. There was an Act of Elizabeth which provided that no house should be built without four acres of land attached to it; and upon that rough estimate they estimated the rights of the cottagers, and everybody was satisfied. He considered that, in ordinary agricultural districts, the expenses of £2 per acre would include the necessary roads.

Mr. R. Watkins (Member) expressed his surprise that more care had not been taken of the early inclosure awards, from 1794 to 1820. He had no doubt that most Members of the Institution had had occasion to consult such awards, and had found it sometimes attended with difficulty. In some cases, either from the careless way in which they were kept, or from damp or from vermin, the documents were nearly illegible; in others, they were in the custody of a clergyman, who had ceased to reside in the district, and had

left them in some inaccessible place. He believed that, at that time, no third copy was deposited with the Inclosure Commissioners. Although there might remain but little to be done in future, in the way of inclosures of any magnitude, yet, in the small inclosure which yet remained, there were so many conflicting interests, so many claims to be adjusted, involving so much expense, that, under the most favourable circumstances, he was afraid the value of the property was but little enhanced by the inclosure. Only that day he had been dealing with the case of a farm in Suffolk, under 200 acres, on 25 acres of which there was a claim, on the part of the freeman, for "shackage," or the right to turn out cattle from 5th September to 5th February. Though that was not of much value to the persons having the right, it was, nevertheless, a great nuisance to the owner of the land, and the expense of getting rid of it would be greater than the advantages to be gained by the extinction of the right.

Mr. W. Brown would be glad if the President would give them some account of the large amount of common land, round the town of Dorchester.

The President replied that it was the property of one individual. The leases were gradually expiring, and the whole would become the property of the Prince of Wales. It was not common land, but fields let out on life leases for lives which were gradually falling in.

Mr. E. J. Smith (Member) thought the principal object sought for in the change contemplated by the Bill before Parliament was to make the inclosure more known; not to the owners or occupiers interested,—because, ordinarily, people took care of their own interests,—but to the inhabi-

tants, generally, of the neighbourhood; and so, rather to encourage the interference, if he might so term it, of persons who have no ownership or interest, as it used to be called, in the subject of the inclosure, but to enable other persons, who have been in the habit, illegally, of passing over open heaths and open fields, to do all they can to prevent their inclosure. He thought it carried out that view to a considerable extent; for, if he did not mistake, it provided that one-tenth part of every common was to be given up by the persons who, hitherto, have been the owners of the land, for the convenience, entertainment, and amusement of other persons. Now one-tenth, as far as his experience went, was far beyond the whole cost of any inclosure in which he was ever concerned. He was valuer in the inclosure of about 1,000 acres immediately adjacent to the town of Coventry, in which the value of the 1,000 acres, before the inclosure, was about £80,000, and the value, the instant after it was inclosed, was about £160,000; the change of value being occasioned by the simple fact, that, formerly, that area was subject to what had been termed "shackage." In that case, the whole cost certainly did not exceed 25*s.* per acre; whereas, if one-tenth of that area had been set out for the convenience of the country generally, it would have cost, in that single instance, some £16,000. He thought it was out of all proportion that one-tenth of the whole should be set out in *every* case for the convenience of persons who have now no interest in the matter.

Mr. E. Smyth (Associate) remarked that, in stating one-tenth, Mr. Smith had put his case in its mildest form, because, in this Bill, it was provided that the Inclosure Commissioners should set apart *not less* than one-tenth for

recreation and field gardens. It went on to say, that in case there should not be a sufficient quantity of the common land suitable for those purposes, the commissioners should then direct a fund to be raised (as part of the expenses of the Inclosure), as an equivalent for the deficiency. Then there was a further clause, which he wanted the time or the skill to understand. The section 3, to which he had referred, provided a minimum, not a maximum allotment; but section 13 (which possibly there was good reason for) went on to provide for the purchase of land *exceeding* the amount required by the Bill. As far as he understood the Bill there was no maximum fixed—only a minimum —viz., "*not less* than one-tenth." The ruling idea in the drafting of the Bill seemed to be, that the public should get as much as possible, rather than that those who gave up the rights should be compensated for them. He supposed Members of both Houses would take care that the parties should be compensated.

Mr. W. Brown remarked that the judgment in the Berkhampstead case was that the public had no right in the matter. That common, which was within two miles of his house, was of the extent of 1,500 acres.

Mr. Lloyd believed that it was in consequence of the decision just referred to, that the present Bill was introduced.

Mr. A. Savill (Member) said there was one clause which appeared to him likely to be very effective in stopping all future inclosures within a reasonable distance of any town. He believed a petition for inclosure, signed by two-thirds of the ratepayers, enabled the commissioners to make a provisional order for inclosure; but in the proposed Bill

they would find that a meeting was to be advertised, but it did not say who were entitled to attend. As far as he understood the section, any persons might attend the meeting, and constitute a majority against the inclosure.

Mr. SMYTH replied that the 12th section specified the requisite assent.

The PRESIDENT said that the great step towards facilitating the inclosure of commons was taken in the year 1845, when the large expense involved by an Act for inclosure was stopped. Present legislation appeared, however, to be tending the other way; for it seemed to be placing obstructions in the way of inclosures, so that it was difficult to get a Bill passed for any inclosure in the neighbourhood of towns. One of the great advantages (as explained by several speakers), secured by the Act of 1845, was that of exchanges; and he agreed with Mr. WESTBURY that the parties interested in them should pay the moderate costs which were now incurred in such transactions. It had been his lot to exchange, in one case, some 1,200 acres on each side, and it cost the parties nothing more than the expense of the advertisements. At that time, before Mr. GOLDNEY moved in the matter, the inclosure office expenses were paid by the country. He supposed that if the exchange he referred to had taken place under the old proceeding of "deeds," it would have cost the parties some £1,200. There could be no doubt that greatly increased value had been given to estates by the power of exchange given to landowners, and the moderate charges now made, would not, he believed, impede exchanges in any way. He thought the inclosure of common field land, if this Bill happened to pass, would not be promoted by the clause to which reference had

been made by Mr. Smith, requiring an allotment of possibly one-tenth for recreation grounds and field gardens. That seemed to him a startling clause. There was one very large common which was sought to be inclosed, and a meeting with reference to it was held on Saturday, which was very unanimous in its opinion, that the New Forest of Hampshire should be inclosed; but it was a large tract of land, and if one-tenth was to be set apart for those purposes, it would amount to about 6,000 acres. He regarded the present Bill more as the indication of a desire to set out much larger allotments of land for recreation, than as that of seeking to promote any other object. On the subject of awards, referred to by Mr. Watkins, he would say that he had more than once found a piece of land set out under three different awards. Public rights seemed to be the primary care of the present House of Commons; but to give the public one-tenth of the land reclaimed was giving, practically, more than the owner of the soil usually obtained.

The Meeting then adjourned.

THE ANNUAL GENERAL MEETING,

Monday, May 30th, 1870.

JOHN CLUTTON (PRESIDENT) IN THE CHAIR.

Messrs. J. H. CLUTTON and C. J. SOUTHWELL having been requested to act as Scrutineers of the ballot for the Election of Council, the balloting list submitted by the Council in accordance with the bye-laws, and the record of attendance of the Members of Council, were read, and the ballot declared open.

The Report of the Council on the state of the Institution, and the Statement of Receipts and Expenditure for the year 1869, were read.

RESOLVED—"That the Report of the Council and the Balance Sheet be received and approved, and be printed and circulated with the 'Transactions.'"

RESOLVED—"That the thanks of the Institution be given to Messrs. CHARLES STEPHENSON and ARTHUR GARRARD for their efficient performance of their duties as Auditors, and that they be requested to continue their services for the ensuing year."

Messrs. STEPHENSON and GARRARD expressed their willingness again to undertake the duties of Auditors.

RESOLVED—"That the thanks of the Institution are due and be given to the President, the Vice-Presidents, and the other Members and Associates of Council for the able manner in which they have administered the affairs of the Institution."

Resolved—"That the thanks of the Institution be given to Mr. John Wornham Penfold (the Honorary Secretary), to the Treasurer, and other Officers of the Institution, for the manner in which they have executed their several duties."

The ballot having been closed, the Scrutineers reported that the following gentlemen had been elected as Council for the ensuing year, viz. :—

President.

RICHARD HALL

Vice-Presidents.

JEREMIAH MATHEWS	THOMAS HUSKINSON
EDWARD NORTON CLIFTON	JOHN OAKLEY

Members of Council.

CHARLES FREDERICK ADAMS	THOMAS HORSEY
WILLIAM JAMES BEADEL	EDWARD RYDE
VIRGOE BUCKLAND	CHARLES JOHN SHOPPEE
FREDERICK JAMES CLARK	EDMUND JAMES SMITH
HENRY CRAWTER	WILLIAM STURGE
ROBERT COLLIER DRIVER	FRANCIS VIGERS

Associates of Council.

JOHN HORATIO LLOYD FREDERICK JOSEPH BRAMWELL

Resolved—"That the thanks of the Meeting be given to Messrs. J. H. Clutton and C. J. Southwell for their services as Scrutineers."

A vote of thanks to the President for his conduct in the Chair having been passed unanimously, the Meeting separated.

THE SECOND

ANNUAL REPORT OF THE COUNCIL

TO THE

ANNUAL GENERAL MEETING, MAY 30TH, 1870.

THE Council have the pleasure to report the continued success of the Institution during the second year of its existence, and a steady increase in the number of its Members. Since the Annual General Meeting of last year, 22 Members and 21 Associates have been elected; and the Institution now consists of 180 Members, 59 Associates, and 2 Students. One Member (Mr. R. Thring, of Winchester) has died during the past session.

It will be seen that the expenditure has been kept within the revenue derived from annual subscriptions, rents, &c., and that the whole of the entrance fees have been placed to capital account. A small portion of this has been devoted to some improvements in the premises, and to new furniture; the remainder will form the nucleus of a building or purchase fund, available, when the time arrives, for extending the present accommodation, or acquiring a longer interest in the premises now held by the Institution.

The balance sheet for the year ending December 31st 1869, shows the following results :—

Receipts.	£	s.	d.	Expenditure.	£	s.	d.
Total Revenue . . .	797	4	4	Total Payments out of Revenue	720	10	0
Revenue Balance in hand, January 1st, 1869	237	11	4	Revenue Balance in hand, 1st January, 1870	314	5	8
Entrance Fees, &c., carried to Capital Account	269	17	0	Payments out of Capital	41	16	0
Capital Balance in hand, January 1st, 1870	646	6	9	Capital Balance in hand, January 1st, 1870	874	7	9
	£1,950	19	5		£1,950	19	5

A summary of the receipts and expenditure for the present year, up to this date, is as follows :—

Receipts.	£	s.	d.	Expenditure.	£	s.	d.
Total Revenue . . .	785	11	11	Total Payments out of Revenue . . .	487	14	2
Revenue Balance in hand, January 1st, 1870	314	5	8	Revenue Balance in hand, May 30th, 1870	612	3	5
Entrance Fees carried to Capital Account	115	10	0	Total Payments out of Capital. . . .	5	5	0
Capital Balance in hand, January 1st, 1870	874	7	9	Capital Balance in hand, May 30th, 1870	984	12	9
	£2,089	15	4		£2,089	15	4

Of the balance on capital account, £157 10*s.* (Life Compositions) is invested in the purchase of £168 18*s.* Consols, and £800 in the purchase of £858 12*s.* 9*d.* New 3 per Cents. —leaving a cash balance of £27 2*s.* 9*d.*

Of the balance on revenue account, £300 is invested in the purchase of £321 8*s.* 6*d.* New 3 per Cents., leaving a cash balance of £303 16*s.* 1*d.*

The total liabilities to this date do not exceed £50.

There is now a balance of £205 16*s.* 7*d.* in hand on the Library Account. By a recent Act of Parliament, the Ordnance Survey of Great Britain has been transferred from the War Department to the Commissioners of Her Majesty's Works and Public Buildings. The Council still hope that a grant may be made to the Institution of some of the publications of the Ordnance Survey Department, and thus that a considerable expenditure on account of maps, &c., may be saved, so that this balance may be capable of appropriation to the purchase of books.

The Council have again to record many donations in books and money to the library, and a list of these donations will be found in the Appendix to the forthcoming volume of "Transactions." Among them will be noticed, especially. the valuable present of "Hoare's Modern Wiltshire" (6 vols., folio), by Mr. R. Attwood, of Salisbury, who, although he has not joined the Institution, is one of the most experienced Members of the profession, and takes a great interest in any matter which concerns its welfare.

The question of Agricultural Customs has occupied the attention of the Council during the session, and many valuable returns have been made to the circulars requesting information on the subject. The Council hope to render this information available to the Members in some convenient form; but there are still several districts with respect to which further information is required. These localities are indicated in the fortnightly general notices, and the Council strongly urge on those Members who may have experience

or connections in these places, the importance of completing the series as early as possible.

In compliance with a general wish, the Council have determined on issuing a certificate of Membership of the Institution. These certificates are in course of preparation, and will be forwarded to Members and Associates during the recess.

Thirteen Ordinary General Meetings have been held during the session, and the Council have to express their thanks to those gentlemen, who, by reading Papers, or taking part in the discussions, have materially contributed to their success.

Six Papers have been read, comprising the following subjects, viz. :—

The Opening Address, by JOHN CLUTTON, President.

The Distribution and Agricultural use of Town Sewage (continued), by WILLIAM HOPE.

The Enfranchisement of Copyholds of Inheritance, by EDWARD SMYTH.

Farming Covenants, by ELIAS PITTS SQUAREY.

A Plea for Culture in the Profession of a Surveyor, by JEREMIAH MATHEWS.

Parochial Assessments (continued), by EDWARD RYDE.

Notes on the Inclosure Acts and their Results, by RICHARD HALL.

It is gratifying to the Council to be enabled to reiterate their confidence in the continued success of the Institution, and the full expectation that the advantages which it was hoped would result from its foundation, will be realized. The success of such a Society depends in a great measure on the individual exertions of the Members, and its influence and usefulness increases in proportion to the number of duly qualified Members it is enabled to enrol.

Dr. STATEMENT OF RECEIPTS AND EXPENDITURE

REVENUE

RECEIPTS.

1869.	£	s.	d.	£	s.	d.	£	s.	d.
143 Members' Subscriptions for 1869, at £3 3s. ...	450	9	0						
2 New Members	6	6	0						
4 Members, in advance for 1870, ...	12	12	0						
				469	7	0			
35 Associates' Subscriptions for 1869, at £2 2s. ...				73	10	0			
1 Student's Subscription „ £1 1s. ...				1	1	0			
							543	18	0
Rent							228	1	6
Dividends							25	4	10
							£797	4	4
Balance in hands of Treasurer and Secretary, December 31st, 1868 ...							237	11	4
							£1034	15	8

CAPITAL

	£	s.	d.
37 Members' Entrance Fees for 1869, at £5 5s.	194	5	0
24 Associates' „ „ at £3 3s.	75	12	0
	269	17	0
Balance in hands of Treasurer, December 31st, 1868	646	6	9
	£916	3	9

LIBRARY

	£	s.	d.
Donations	170	6	0
Balance in hands of Treasurer, 31st December, 1868	169	18	6
	£340	4	6

SUM

	£	s.	d.
Revenue Account	1034	15	8
Capital	916	3	9
Library	340	4	6
	£2291	3	11

ASSETS AND LIABILITIES,

ASSETS.

	£	s.	d.
Cash in hands of Treasurer and Secretary	456	8	2
Value of Furniture, &c.	166	0	0
One Quarter's Rent of Ground Floor Offices, due	30	0	0
„ „ Second Floor Offices, due	33	6	0
„ „ Stables, due	11	5	0
Investments	1007	10	0
	£1704	9	2

FOR THE YEAR ENDING DECEMBER 31ST, 1869. *Cr.*

ACCOUNT.

EXPENDITURE.

1869.	£ s. d.	£ s. d.
Rent to 29th September, 1869, less Property Tax	251 14 6	
Fuel, Light, and Water	19 14 0	
Rates and Taxes	133 1 5	
		404 9 11
Repairs		4 0 9
Stationery, Postage, &c.		18 5 0
Salaries and Wages		144 15 9
Tea and Coffee at Meetings		5 17 2
Household Effects		9 9 6
Housekeeper's Petty Cash Expenses		3 18 8
Publication of "Transactions"—Printing	110 8 6	
Reporting	18 18 0	
	129 6 6	
Less sale of ditto	11 15 9	
		117 10 9
General Printing		12 2 6
		720 10 0
Cash in hands of Secretary	8 7 4	
„ „ Treasurer	5 18 4	
Invested in New 3 per Cents	300 0 0	
		314 5 8
		£1034 15 8

ACCOUNT.

	£ s. d.	£ s. d.
Furniture		27 2 0
Alterations		14 14 0
Invested in Consols—Life Compositions	157 10 0	
„ New 3 per Cents.	550 0 0	
	707 10 0	
Cash in hands of Treasurer	166 17 9	
		874 7 9
		£916 3 9

FUND.

	£ s. d.
Purchase of Books, Maps, &c.	64 19 9
Cash in hands of Treasurer	275 4 9
	£340 4 6

MARY.

	£ s. d.
Revenue Account	720 10 0
Capital	41 16 0
Library	64 19 9
Invested	1007 10 0
Cash in hands of Treasurer and Secretary	456 8 2
	£2291 3 11

DECEMBER 31ST, 1869.

LIABILITIES.

	£ s. d.
One Quarter's Rent of 12, Great George Street, to December 25th ...	85 13 9
Sundry Accounts, Rates and Taxes (say)	80 0 0
Balance	1538 15 5
	£1704 9 2

Examined with the Books and Vouchers and found correct, May 17th, 1870.

CHAS. STEPHENSON, } *Auditors.*
ARTHUR GARRARD, }

APPENDIX TO VOL. II.

Memoir.

ROBERT THRING (Member) was born at Wilton, near Salisbury, in the year 1814, and was educated at the latter place. His early life was devoted to agricultural pursuits, which he quitted in the year 1851, and entered the office of Messrs. Clutton, of Whitehall Place, where he remained for thirteen years as an active assistant.

In 1865, on the death of Mr. R. C. Gale, Land Agent and Surveyor of Winchester, Mr. Thring entered into partnership with his son, Mr. A. C. Gale, with whom he carried on the business at Winchester, under the firm of "Thring & Gale," for upwards of four years, when the state of his health obliged him to submit to a severe surgical operation, from the effects of which he did not recover, and died on the 15th of July, 1869, aged 55. He was buried at Winchester.

LIST OF DONATIONS AND CONTRIBUTIONS UP TO MAY 30TH, 1870.

CONTRIBUTIONS IN MONEY TO LIBRARY FUND.

	£	s.	d.
Mr. G. H. Appleby	3	3	0
„ G. Beaumont	2	2	0
„ G. P. Bidder	1	1	0
„ C. Bidwell	2	2	0
„ J. R. Bonny	3	3	0
„ W. J. Crawley	2	2	0
„ W. L. Dodgson	3	3	0
„ J. S. Ellis	2	2	0
„ W. J. Gardiner	5	0	0
„ J. L. Hornblower	3	3	0
„ H. A. Hubbersty	2	2	0
„ J. Innes	2	2	0
„ E. Kermock	1	1	0
„ J. E. Knollys	2	2	0
„ W. Lovejoy	3	3	0
„ C. A. Macaulay	3	3	0
„ G. M. Smallpiece	2	2	0
„ W. Snooke	5	5	0
„ H. Steward	5	5	0
„ W. Turner	3	3	0
„ F. Willmot	5	0	0
„ F. Wood	2	2	0

DONATIONS OF BOOKS, MAPS, &c.

Donors.	Title of Work.
Architect, Editor of the	"The Architect," 1870.
Attwood, F.	"The History of Modern Wiltshire." By Sir R. C. Hoare. 6 vols. 1822.
Bowler, W. A.	"Horse-hoeing Husbandry; or, an Essay on the Principles of Vegetation and Tillage." By J. Tull. 1762.
Buckland, F.	"The Ninth Annual Report of the Inspectors of Salmon Fisheries (England and Wales)," 1870
Builder, Editor of the	"The Builder," 1870.
Building News, Editor of the	"The Building News," 1870.
Cadle, C.	"Prize Essay on the Making and Management of Cider." By C. Cadle.
,,	"Prize Essay on the Planting and Management of Orchards." By C. Cadle.
,,	"Prize Essay on the Farming Customs and Covenants of England." By C. Cadle.
,,	"Prize Essay on the Improvement of Grass Lands." By C. Cadle.
,,	"Prize Essay on the Management of a Breeding Herd of Cattle." By C. Cadle.
,,	"Prize Essay on the Agriculture of Worcestershire." By C. Cadle.
Caird, J.	Pamphlet on the "Irish Land Question." By J. Caird.
Carpenter, A.	A Treatise on "The Physiological and Medical Aspect of Sewage Irrigation." By A. Carpenter, M.D.
Cobb, R. L.	"The History of Kent." By E. Hasted. 10 vols. 1797.
Crawter, J.	"Historical Antiquities of Hertfordshire." By Sir H. Chauncy. 2 vols. 1826.
Daniel Smith, Son & Oakley, Messrs.	"Tables for Planting and Valuing Underwood and Woodlands." By R. Horton.
Dean, G. A.	"A Treatise on the Land Tenure of Ireland." By G. A. Dean.
Denton, J. B.	"H.C. Committee on Agricultural Customs, Report and Evidence." 1847-8.
Estate Exchange, The	"Index to the Estate Exchange Registers." 1870.

Donors.	Title of Work.
Farebrother, Lye, and Wheeler, Messrs. . .	"History of the City of Gloucester." By T. D. Fosbroke. 1819.
Grantham, R. B. . . .	"Report of the Committee of the British Association on the Treatment and Utilization of Sewage." 1870.
Hall, R., Sen.	"Agricultural Survey of Herefordshire." By J. Duncumb. 1805.
,,	"Agricultural Survey of Berkshire." By W. Mavor. 1809.
,,	"Agricultural Survey of Somersetshire." By J. Billingsley. 1798.
,,	"Agricultural Survey of Oxfordshire." By J. Billingsley. 1809.
,,	"Agricultural Survey of Worcestershire." By W. Pitt. 1810.
,,	"The British Architect." By A. Swann. 1758
,,	"A Collection of Designs in Architecture." By A. Swann. 1757.
,,	"Museum Rusticum." By Various Writers. 6 vols. 1764.
,,	"Vitruvius Brittanicus." By Colin Campbell. 3 vols.
Hedley, T. F.	"Report on the Valuation of the Mansion Houses in the Hexham Union." By T. Hedley.
,,	"Report on the Valuation of Blast Furnaces (in and out of Blast) in the Stockton-on-Tees' Union." By T. F. Hedley.
,,	"Report on the Valuation of the Water Company's Reservoirs in the township of Welton." By T. F. Hedley.
,,	"Letters on Rating Coal Mines." By T. F. Hedley.
Herrtage, S. J. H. . .	"Treatise on Farm Buildings and the State of Agriculture." By Viscount Torrington.
Horwood, J.	"History of Cumberland." 2 vols. By W. Hutchinson. 1794.
Institution of Civil Engineers.	"Minutes of Proceedings." Session 1868-9.
Institution of Mechanical Engineers.	"Proceedings." 1869-70.
Local Government Act Office	"Report upon the Inquiry as to the Alleged Pollution of the River Thames at Barking." By R. Rawlinson, C.E. 1869.
London and Middlesex Archæological Society.	"Transactions." 1870.
Penfold, J. W., Jun. . .	"H.C. Select Committee on the Valuation of Lands and Heritages (Scotland), Report and Evidence." 1865.

Donors.	Title of Work.
Penfold, J. W., Sen. . .	"History of Surrey." By Brayley & Britton. 5 vols. 1850.
Petre, Hon. H. W. . .	"Sewage Cultivation at Lodge Farm, Barking." By Hon. H. W. Petre.
Rees, J. C.	"Private Bills Deposited for Session 1870." 5 vols.
Shoppee, C. J.	Engraved Portrait of Inigo Jones.
,,	"A Survey of Husbandry." By W. Blyth. 1649.
Southwell, C. J. . . .	"The Nature and Property of Soils." By J. Morton.
Tatham, G. H.. . . .	"The Complete Farmer." 2 vols. 1807.
Taylor, G.	"H.L. Select Committee on the Regulation of the Powers of Land Companies, Report, Evidence, and Plans." 1855.
,,	"Table Showing the Value of Tithe Rent Charges for the Year 1870," By G. Taylor.
,,	Various Pamphlets "On Sewage and the Ventilation of Sewers." By J. W. Bazalgette.
The Royal Institution of British Architects . .	"Sessional Papers." 1869-70.
The Statistical Society .	"Journal." 1870.
Watney, D.	"Journals of the Royal Agricultural Society of England." 7 vols.
Wigram, J.	"The History of Hampshire." By R. Mudie. 3 vols. 1838.

INSTITUTION OF SURVEYORS.

List of Members, May 31st, 1870, with Council for Session 1870-71.

Members.

Abbott, Thomas	22, Savile Row, W.
Adams, Charles Frederick (*Member of Council*)	Barkway, Herts.
Appleby, George Habin . .	Fareham, Hants.
Arding, Charles Bennett . .	23, Bedford Row, W.C.
Barry, Charles	1, Westminster Chambers, Victoria Street, S.W.
Beadel, Frederick	25, Gresham Street, E.C.
Beadel, William James . . . (*Member of Council*)	25, Gresham Street, E.C.
Beaumont, George, Jun. . .	East Bridgford, near Nottingham.
Bennett, Thomas	Foxton Hall, Bilton, Northumberland.
Bidwell, Charles	Ely, Cambridgeshire.
Bidwell, Charles Muriel . .	Ely, Cambridgeshire.
Binnie, Thomas	1, Nicholson Street, Glasgow.
Bird, James Binfield . . .	West Cowes, Isle of Wight.
Blount, William	Orchehill House, Gerard's Cross, Bucks.
Bond, Erasmus	23, Bedford Row, W.C.
Bonny, James Rippoth . . .	43, Camden Road, N.W.
Bowler, William Anthony . .	7, Whitehall Place, S.W.
Bradley, Christopher Lonsdale	Richmond, Yorkshire.
Bravender, John	Cirencester, Gloucestershire.
Broadbridge, James . . .	12, Addison Terrace, Kensington, W.
Brown, George	Roborough House, Barnstaple, Devonshire.
Brown, Thomas Forster . .	Guildhall Chambers, Cardiff.
Brown, William	Tring, Herts.
Buck, Albert	Worcester.
Buckland, Virgoe . . . . (*Member of Council*)	72, Cannon Street, E.C.
Burnell, Edward Henry . .	32, Bedford Row, W.C.
Cadle, Clement	Clarence Street, Gloucester, and 87, Chancery Lane, W.C.
Chancellor, Frederic . . .	Chelmsford, Essex, and Pinner's Hall, Old Broad Street.
Chapman, George	14, Cockspur Street, S.W.
Chapman, Thomas	14, Cockspur Street, S.W.
Chinnock, Frederick George .	11, Waterloo Place, S.W.

MEMBERS.

Clark, Frederick James (*Member of Council*)	5, Lancaster Place, W.C.
Clarke, Thomas Chatfeild	63, Bishopsgate Street Within, E.C.
Clayden, John Carter	Barnet, Herts,
Clifton, Edward Norton (*Vice-President*)	7, East India Avenue, E.C.
Clutton, Henry	9, Whitehall Place, S.W.
Clutton, John (*Past President*)	9, Whitehall Place, S.W.
Clutton, Robert	Hartswood, Reigate, Surrey.
Clutton, Robert George	9, Whitehall Place, S.W.
Clutton, William James	The Mount, York.
Cobb, Robert Lake	Higham, Kent.
Collier, John	Salters' Hall, St. Swithin's Lane, E.C.
Collins, Henry Hyman	5, Queen Street, E.C.
Comely, John Gill	Winchester, Hants.
Cooke, Charles Henry	11, John Street, Bedford Row, W.C.
Crawter, Henry (*Member of Council*)	5, Bedford Row, W.C.
Crawter, John	Cheshunt, Herts.
Crickmay, George Rackstrow	St. Thomas Street, Weymouth.
Culshaw, William	Rumford Court, Liverpool.
Currey, Henry	37, Norfolk Street, W.C.
David, Edward	Llandaff, Glamorganshire.
Davids, Charles Henry	Banbury, Oxfordshire.
Dent, John	34, Great James Street, W.C.
Denton, John Bailey	22, Whitehall Place, S.W.
Downs, Henry	Basingstoke, Hants.
Driver, Robert Collier (*Member of Council*)	4, Whitehall, S.W.
Durrant, Edwin Elmer	King's Lynn, Norfolk.
Dymond, Francis Williams	Exeter.
Easton, William	6, Hammet Street, Taunton, Somersetshire.
Eiloart, Ferdinand Gozna	40, Chancery Lane, W.C.
Ellis, John	Artington, Guildford, Surrey.
Eve, William	10, Union Court, Old Broad Street, E.C.
Felton, George	Llandudno, Carnarvon.
Field, Francis	Oxford.
Fuller, Francis	3, Whitehall Gardens, S.W.
Galsworthy, Frederick Thomas	11, Waterloo Place, S.W.
Gardiner, William James	110, Great Russell Street, W.C.
Girdwood, James	49, Pall Mall, S.W.

MEMBERS.

Hall, Richard . . . . . (*President*)	37, Great George Street, S.W.
Hall, Richard, Jun.	37, Great George Street, S.W.
Hall, Robert Wright . . .	37, Great George Street, S.W.
Harvey, John	6, Victoria Place, Haverfordwest, Pembrokeshire.
Harvey, Richard Hart . . .	6, Victoria Place, Haverfordwest, Pembrokeshire.
Haywood, William	Guildhall, London, E.C.
Hilliard, George Bridge . .	Chelmsford, Essex.
Hippisley, Edwin	Chamberlain Street, Wells, Somersetshire.
Hornblower, Joseph Wells .	14, Waterloo Street, Birmingham.
Hornblower, John Lewis . .	9, New Steine, Brighton.
Horsey, Thomas . . . . . (*Member of Council*)	11, Billiter Square, E.C.
Horsfall, Richard	Halifax, Yorkshire.
Horwood, James	10, Paternoster Row, E.C.
Howell, Charles Henry . .	3, Lancaster Place, W.C.
Hudson, William	19, Bennet's Hill, E.C.
Humbert, Charles F. . . .	Watford, Herts.
Humphreys, Charles, Jun. . .	61, Leadenhall Street, E.C.
Hunt, Henry Arthur . . .	4, Parliament Street, Westminster, S.W.
Hunt, Josiah	11, Park Street, Westminster, S.W.
Huskinson, Thomas . . . . (*Vice-President*)	Epperstone, Southwell, Notts.
Hussey, George Henry . . .	The Green, High Wycombe, Bucks.
I'Anson, Edward	7A, Laurence Pountney Hill, E.C.
Innes, James	Wroxton, Banbury, Oxfordshire.
Jackson, Frederick	Nottingham.
Jonas, John Carter	27, Market Hill, Cambridge.
Jones, Harry	4, Parliament Street, Westminster, S.W.
Kermock, Edwin	Kingston-upon-Thames.
King, William David . . .	Woodcrofts, North End, Portsmouth.
Knollys, James Edward . .	Fitzhead Court, Taunton, Somerset.
Lambert, William	4, New Basinghall Street, E.C.
Laurance, John, Jun. . . .	Warmington, near Oundle, Northants.
Lavender, Joseph	26, Bedford Row, W.C.
Lee, Charles	3, Whitehall Place, S.W.
Lees, John	Reigate, Surrey.
Lovejoy, William	55, Chancery Lane, W.C.
Lye, John Gaunt	8, Lancaster Place, W.C.
Macaulay, Colin Alexander .	Leicester.
Mann, Charles John . . .	21, Parliament Street, S.W.

MEMBERS.

Marr, James	8, Adam Street, Adelphi, W.C.
Marrable, Frederick	21, Whitehall Place, S.W.
Marsh, Henry Edmund	54, Cannon Street, E.C.
Martin, James	Wainfleet, Boston, Lincolnshire.
Martin, Samuel Dickinson	1, Park Place, Leeds, Yorkshire.
Mathews, Jeremiah (*Vice-President*)	15, Waterloo Street, Birmingham.
Mathews, William, Jun.	15, Waterloo Street, Birmingham.
Menzies, William	Parkside, Staines, Middlesex.
Murton, William	Tunstall, Sittingbourne, Kent.
Neale, Charles James	High Oakham, Mansfield, Notts.
Norman, William	8, Spring Gardens, S.W.
North, George	22, Whitehall Place, S.W.
Oakley, John (*Vice-President*)	10, Waterloo Place, S.W.
Oakley, Christopher	10, Waterloo Place, S.W.
Owen, Thomas Rule	High Street, Haverfordwest, Pembrokeshire.
Penfold, John Wornham (*Honorary Secretary*)	17, Parliament Street, Westminster, S.W.
Poundley, John Edward	Black Hall, Kerry, Montgomeryshire.
Prickett, George	62, Chancery Lane, W.C.
Rawlence, George	Salisbury, Wilts.
Rawlence, James	Salisbury, Wilts.
Raynbird, Hugh Edward	Basingstoke, Hants.
Rigden, Richard Henry	The Close, Salisbury, Wilts.
Roberts, Richard	25, Laurence Pountney Lane, E.C.
Robins, Edward Cookworthy	16, Southampton Street, Strand, W.C.
Rosser, William	Llanelly, Carmarthen.
Rushworth, Edmund	22, Savile Row, W.
Ryde, Edward (*Member of Council*)	17, Parliament Street, Westminster, S.W.
Saunders, Cecil George	21, Parliament Street, S.W.
Saunders, Edward	10, Bridge Street, Westminster, S.W.
Savill, Alfred	3, St. Helen's Place, E.C.; and Chigwell, Essex.
Scott, Thomas Colville	19, King's Arms Yard, E.C.
Shoppee, Charles John (*Member of Council*)	61, Doughty Street, W.C.
Smellie, Thomas Davies	215, St. Vincent Street, Glasgow.
Smith, Charles Bovill	Wickham, Hants.
Smith, Charles John	10, Waterloo Place, S.W.

MEMBERS.

Smith, Edmund James (*Member of Council*)	16, Whitehall Place, London, S.W.
Snooke, William	6, Duke Street, London Bridge, S.E.
Southwell, Charles Josiah	9, Whitehall Place, S.W.
Spackman, Henry	6, Terrace Walks, Bath.
Squarey, Elias Pitts	Odstock, Salisbury, & 22, Great George Street, S.W.
Stanley, Henry	Bury St. Edmund's, Suffolk; & 2, Walbrook, E.C.
Statter, Thomas	Knowsley, Prescott; and Standhill, Whitefield, Manchester.
Stephenson, Charles	4, Parliament Street, Westminster, S.W.
Steward, Herbert Thomas	3, Westminster Chambers, S.W.
Sturge, Robert Fowler	1, Broad Street, Bristol.
Sturge, William (*Member of Council*)	1, Broad Street, Bristol.
Thomas, John Edmund	Hay, Breconshire, and 11, Park Street, Westminster, S.W.
Thynne, Edward Lewis	11, Great George Street, S.W.
Thynne, Frederick George	11, Great George Street, S.W.
Toner, John	6, Furnival's Inn, E.C.
Trist, George	62, Old Broad Street, E.C.
Trumper, Richard	23, Lincoln's Inn Fields, W.C.
Tuckett, Philip Debell	10A, Old Broad Street, E.C.
Turner, William	Ipswich, Suffolk.
Vigers, Francis (*Member of Council*)	4, Frederick's Place, E.C.
Vigers, Frank	4, Frederick's Place, E.C.
Vigers, Robert	4, Frederick's Place, E.C.
Wallen, John	1, Bishopsgate Street Without, E.C.
Waring, Thomas	St. Mary Street, Cardiff.
Watkins, Robert	16, Whitehall Place, S.W.
Watney, Daniel	62, Old Broad Street, E.C.
Webb, George	Tunstall, Sittingbourne, Kent.
Westbury, Giles	Andover, Hants, & 44, Lincoln's Inn Fields, W.C.
Wheeler, Thomas	8, Lancaster Place, W.C.
Whichcord, John	16, Walbrook, E.C.
Williams, George Barnes	Frederick's Place, E.C.
Williams, Stephen William	Rhayader, Radnorshire.
Willmot, Francis	33, Waterloo Street, Birmingham.
Wilson, Andrew	7, East India Avenue, E.C.
Withall, Richard Augustus	4, Westminster Chambers, Victoria Street, S.W.
Wood, Frederick	Albert House, Rugby, Warwickshire.
Wood, William Bryan	Chippenham, Wilts.
Woodhouse, John Thomas	Overseal, Ashby-de-la-Zouch, Leicestershire.
Woolley, Thomas Smith	South Collingham, Newark, Notts.

Associates.

Badcock, Philip	9, Whitehall Place, and 4, Aldridge Road, Westbourne Park, W.
Barry, John Wolfe	17, Parliament Street, Westminster, S.W.
Beauchamp, Charles Davie	9, Whitehall Place, S.W.
Bidder, George Parker, Jun.	3, Paper Buildings, Temple.
Bramwell, Frederick Joseph (*Associate of Council*)	37, Great George Street, Westminster, S.W.
Butler, Arthur	7, Staple Inn, W.C.
Carlisle, William Thomas	8, New Square, Lincoln's Inn, W.C.
Carritt, Ernest	16, Basinghall Street, E.C.
Catling, Robert Charles	Needham Hall, Elm, Cambridgeshire.
Clutton, John Henry	9, Whitehall Place. S.W.
Clutton, Ralph	9, Whitehall Place, S.W.
Clutton, Ralph William	Hartswood, Reigate.
Coxwell, John Edward	32, Walbrook, E.C.
Crawley, William Jeeves	10, Waterloo Place, Pall Mall, S.W.
Dean, Henry	Southam, Rugby, Warwickshire.
Dodgson, Wilfred Longley	16, Whitehall Place.
Dowden, Henry Joseph	4, Whitehall, S.W.
Easton, Edward	23, Duke Street, Westminster, S.W.
Ellis, John Smith	31, Nicholas Lane, E.C.
Elwin, George Harvey	London and South Western Railway Terminus, Waterloo Road, S.E.
Fawcett, James Pogue	5, Lancaster Place, W.C.
Fowler, John	2, Queen Square Place, S.W.
Fraser, Alexander	32, Brook Street, Hanover Square, W.
Garrard, Arthur	17, Finsbury Square, E.C.
Grantham, Richard Boxall	22, Whitehall Place, S.W.
Herrtage, Sidney John Hervon	Surbiton, Surrey.
Hollway John George	Lamb Building, Temple, W.C.
Hope, William	Parsloes, Barking, Essex, and 8, Finch Lane, E.C.
Horsley, Richard	Gresham Buildings, Basinghall Street, E.C.
Hubbersty, Henry Alfred	South Collingham, Newark, Notts.
Johnson, Thomas Marr	22, Great George Street, Westminster, S.W.
Johnstone, Andrew	25, Gresham Street, E.C.
Jonas, Henry	4, Whitehall, S.W.

ASSOCIATES.—STUDENTS.

KEELE, EDWARD RUSHWORTH .	5, Frederick's Place, Old Jewry, E.C.
LEACH, GEORGE ARCHIBALD, LIEUT.-COLONEL	Tithe and Inclosure Commission Office, St. James's Square.
LEE, CHARLES WILLIAMS . .	3, Whitehall Place, S.W.
LLOYD, JOHN HORATIO . . (*Associate of Council*)	100, Lancaster Gate, W., and King's Bench Walk Temple.
LOTT, JOSEPH	12, Great George Street, S.W.
NASH, ALFRED JAMES. . . .	Farnham, Surrey.
PETRE, HON. HENRY WILLIAM .	Springfield, Chelmsford, Essex.
PHILBRICK, FREDERICK ADOLPHUS	Lamb Building, Temple.
REES, JOHN CHARLES . . .	6, Parliament Street, S.W.
REX, WILLIAM	11, Waterloo Place, S.W.
SMALLPIECE, GEORGE MOLINEUX	9, Whitehall Place, S.W.
SMITH, CHARLES JOHN . . .	Darlington, Durham.
SMITH, HERBERT EDMUND . .	16, Whitehall Place, S.W.
SMITH, WILLIAM BINNS . . .	7, New Square, W.C.
SMYTH, EDWARD	9, Whitehall Place, S.W.
TATHAM, GEORGE HENRY . .	14, Cockspur Street, Pall Mall, S.W.
TAYLOR, GEORGE	Tithe and Inclosure Commission Office, St. James's Square.
THOMPSON, CHARLES WILLIAM .	17, Parliament Street, S.W.
TOOGOOD, HENRY	16, Parliament Street, S.W.
TROLLOPE, GEORGE FRANCIS . .	15, Parliament Street, Westminster, S.W.
VULLIAMY, HENRY	10, City Road, Finsbury Square, E.C.
WARNER, WILLIAM HENRY . .	4, Whitehall, S.W.
WIGRAM, JOHN	Bromleys, Harlow, Essex.
WILLIAMS, RICHARD PRICE . .	37, Great George Street, S.W.
WILSON, WILLIAM	4, Victoria Street, S.W.
WING, THOMAS TWINING . . .	Bedford.

Students.

BUSHBY, GEORGE, JUN. . . .	9, Whitehall Place, S.W.
RUSHWORTH, EDMUND WALTER .	22, Savile Row, W.

BIBL. LONDIN. UNIV.